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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.


PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. VI.

CHICAGO, ILLINOIS, SEPTEMBER 15, 1887.

No. 3.

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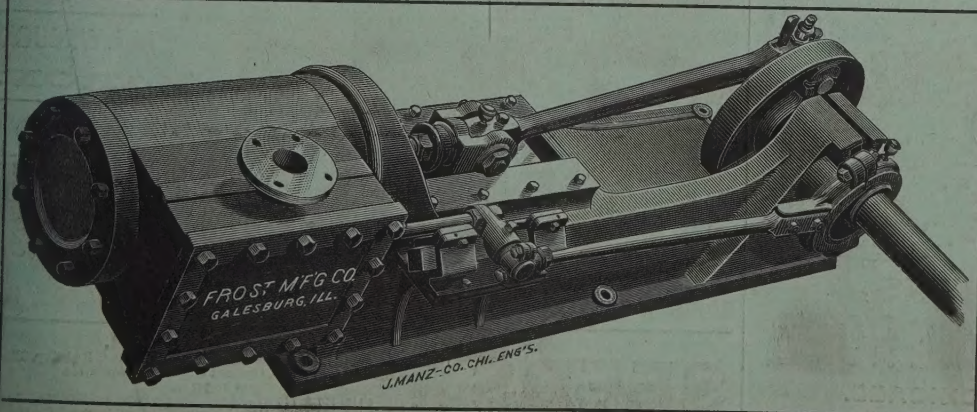
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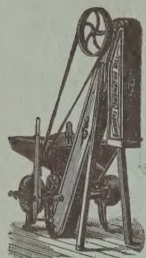
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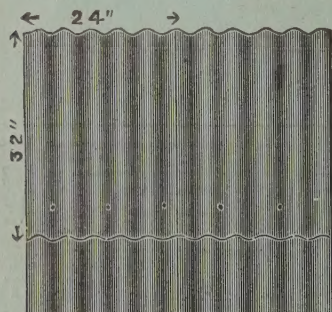
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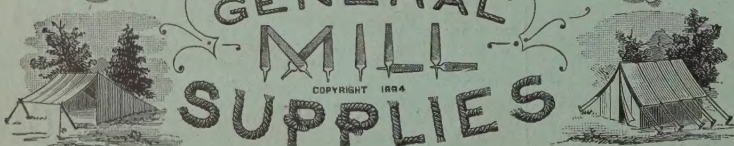


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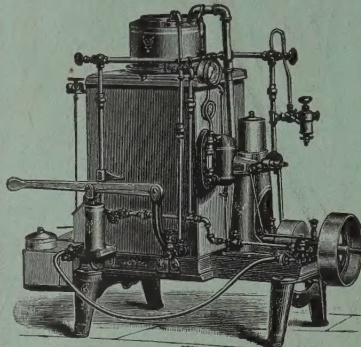
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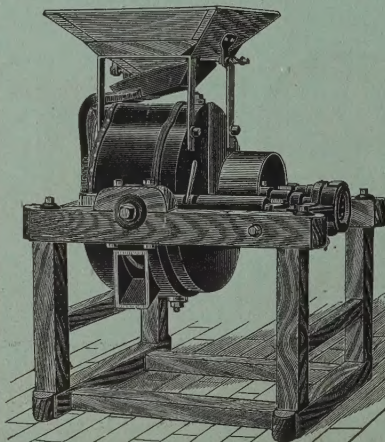
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Can be started or stopped at pleas-
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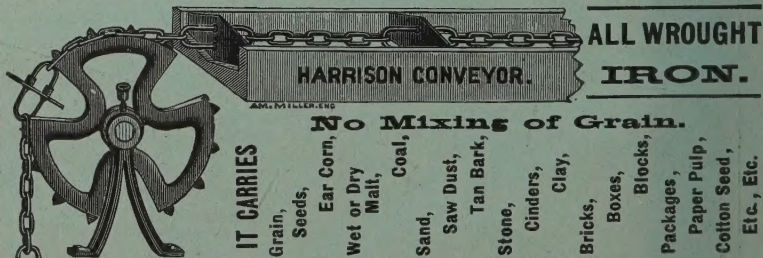
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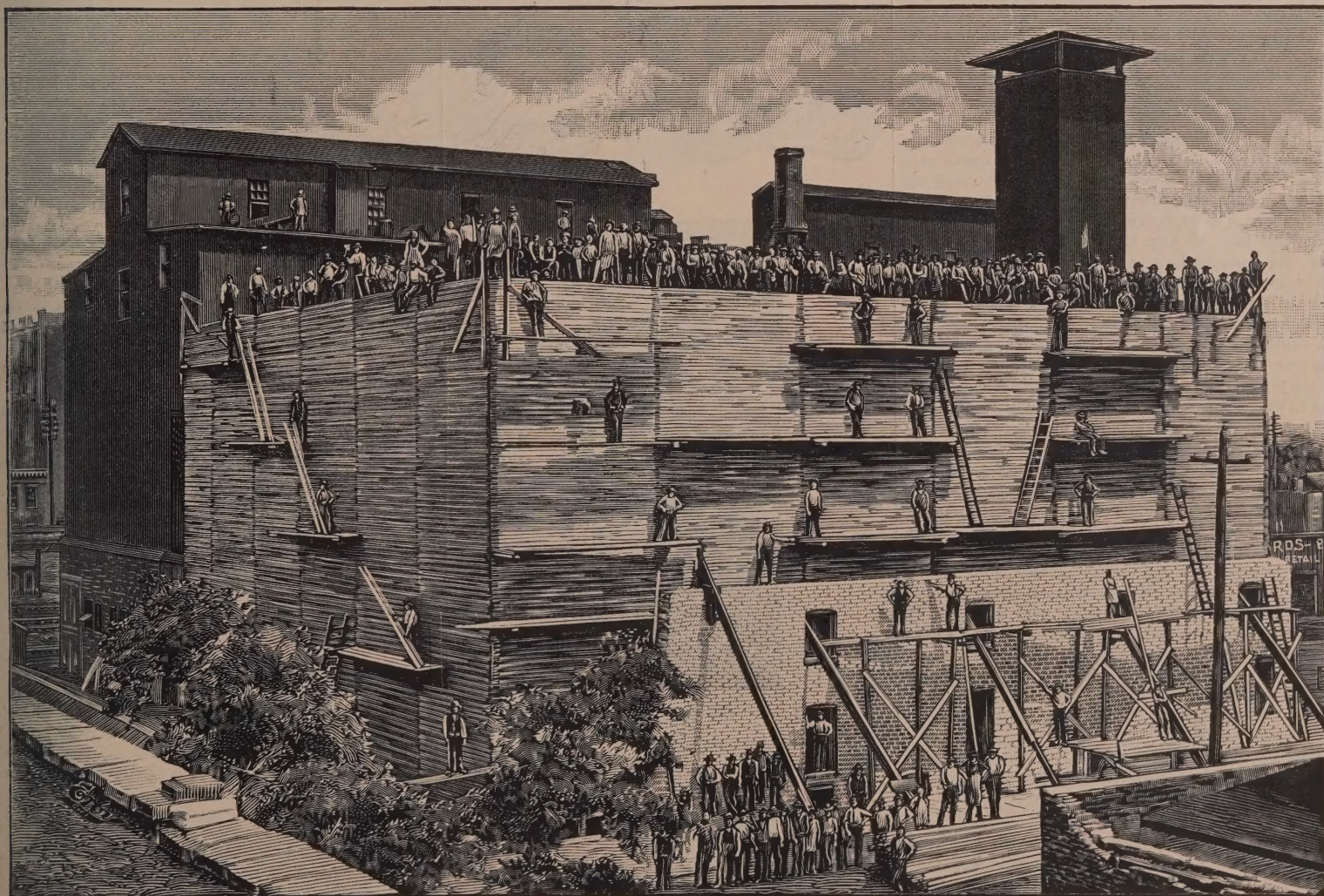
A FEAT IN ELEVATOR BUILDING.

The late corner in wheat in this city was replete with incidents, many of which will not soon be forgotten.

the site formerly occupied by their malt house on Carroll avenue, near Ada street, in this city.

From June 2 to June 16, travelers on the Chicago, Milwaukee & St. Paul Road noticed some such scene as our

ing was complete with its elevators and 700 feet of conveyors, and two days later 10,000 bushels of wheat were stored in its bins. The capacity of the elevator is 425,000 bushels. Fourteen teams were employed hauling the lum-



BUILDING THE 425,000-BUSHEL ADDITION TO HESS ELEVATOR "A" IN CHICAGO.

One of these was the building of an elevator of nearly half a million bushels' capacity in a fortnight. The demand for storage room during the corner was so great that in the latter part of May the E. Hess Elevator Co. determined to erect an addition to Hess Elevator "A," on

engraving portrays. In fourteen days a structure 100 feet by 90 feet and 70 feet high was erected complete, the foundation and the cribbing going up at the same time. No hoisting machinery was used, the men handling every stick of timber, and at the end of the fortnight the build-

ber, of which 1,050,000 feet were used, and several dray loads of nails; 150 men worked ten hours a day, and by an ingenious arrangement work was carried on at the same time on the foundation and the cribbing. Mr. Hess congratulates himself that he has beaten the record in elevator

building by at least two weeks. This was truly phenomenal building, and shows how dangerous is the attempt to corner storage capacity.

[For the AMERICAN ELEVATOR AND GRAIN TRADE.]

THE PNEUMATIC SYSTEM OF TRANSPORTING GRAIN.

BY JOSEPH LEWIS.

There is nothing new in the idea of transferring substances from one place to another by pneumatic pressure, and there are quite a number of live patents at the present time for various devices to perfect this very desirable system. The most familiar example of this principle is the common tin pea-shooter of infant mischief, by which peas are sucked up into the mouth and then blown out of the tube where desired.

Two principles are involved in this simple illustration; each has its advocates, each possesses good and bad points, and each is the subject of patents.

I have made some extensive experiments on both these principles, and my conclusions are in favor of a direct blast of compressed air, in preference to the suction or vacuum principle; first because the latter is limited to atmospheric pressure for the amount of suction force which can be obtained, whereas, the compressed air blast can be regulated anywhere between a pea-shooter and a cyclone, in order to accomplish any speed or quantity determined on per minute. Secondly, the vacuum system necessitates an air-tight receptacle to represent the mouth in the pea-shooter combination; from this receptacle the grain must be blown through another pipe, or dumped in some other way. All this requires expensive, cumbersome and unreliable machinery; whereas, if we adopt a direct blast of compressed air and employ the current induced by that blast to feed the transferring tube, the apparatus is as simple as the pea-shooter, and reliable, because there is no machinery to get out of order.

The only difficulty that presents itself in this case is the question, "will the induced current of air be sufficient to supply a compact body of grain to the transferring tube for the compressed air blast to act upon in sufficient quantity to pay for the power employed?" Experiments say "yes, if the blast and jet apparatus are scientifically adjusted to each other and to the size of the transferring tube." If this is so when tested on a scale suitable for commercial purposes, then the pneumatic system has no competitor for speed, economy and easy management.

In your issue of Aug. 15, I notice the report on the trial of Lyman Smith's barge "Cyclone" at Cleveland, which appears very satisfactory and encouraging. Whatever those men may say who have capital invested in the present system, it should be accounted as nothing. Did the promoters of the electric light expect or solicit aid from gas monopolies? No, they depended on the value of the proposed innovation to drive gas out of the market, and so educated the public to support their enterprise.

There can be no question that the pneumatic system could be quickly perfected and universally introduced, if supported by men of capital who would employ the usual methods to induce the public to support the enterprise as a safe, legitimate and profitable investment for capital, and to secure the monopoly of handling all the grain in transit by pneumatic pressure. This enterprise is of enormous proportions and requires corresponding capital to operate the business with certainty of success, and all persons interested in the grain trade will profit largely by supporting the new system, regardless of the opinions of persons who are either ignorant of its principles, or biased by the consideration that their capital is locked up in the present intricate and costly system of machinery, which, however, must at no distant period give way to the pneumatic system.

With your permission, at some future time I will give some idea of the possibilities of this system in regard to speed and economy in transferring grain.

This conversation is reported to have occurred between a traveler passing a corn-field, where the stalks were few, and yellow, and stunted, and a boy hoeing in the field: "You seem to have a small crop of corn, my boy." "Yes," was the prompt response, "we always plant the small kind." "But it is very yellow." "Oh, yes; father prefers the yellow variety." "But, I mean, you won't have more than a half crop." "Oh, no, we don't expect it; father and uncle always plant on shares." Evidently there was nothing the matter with that corn-field.

THE SMITH PATENT BELT FASTENER.

The Smith Patent Belt Fastener is not a new fastener, as it has been upon the market for over four years, sufficiently long enough to enable the thousands who have used it to pass judgment upon it, and this judgment is decidedly in its favor as is evidenced by the strong endorsements of those who have tried it and by the constantly increased demand for it. But the number of belt users in this country is so large that perhaps the great majority of them are ignorant of the merits of this contrivance. It is

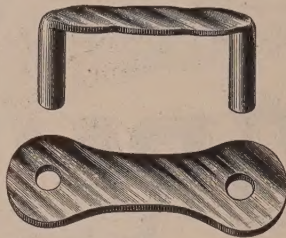


FIG. 1.

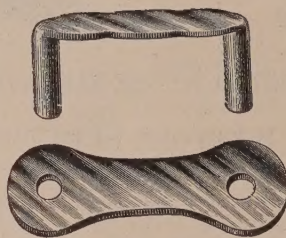


FIG. 2.

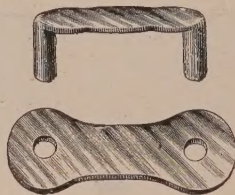
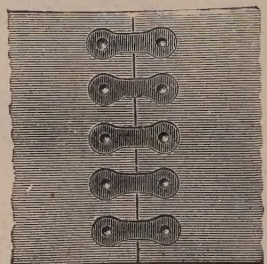
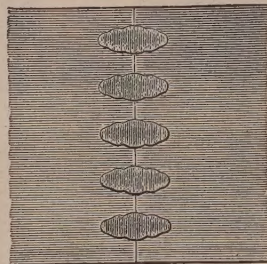


FIG. 3.



FIG. 4.



BELT FASTENED WITH SMITH FASTENER.

a very little thing, but capable of doing an immense amount of good in this world of busy shops and factories. The agents, Thornburgh & Glessner, of Chicago, claim that if used properly it will prove a cure-all for nearly, if not quite, all of the annoyance caused by poorly laced or badly fastened belts.

Here is a peculiarly made copper rivet of the shape shown in the cuts, and provided with a washer made to correspond, and the method of application is so simple and easy that a word or two will explain it. A hole is punched by a punch provided for the purpose, the rivet or fastener is put through the two holes, the washer is placed in position and the rivet ends hammered down. The result is a perfect fastening, warranted to last as long as the belt lasts. It passes smoothly over the pulleys,

causing no jar as the backs of the fasteners are nearly flush with the surface of the belt. Longer life to the belt and a steadier power is thus guaranteed, and the saving in time and trouble in a mill or factory equipped with these fasteners will amount to many dollars every year, while the cost of the fastener is a small item, one box fastening from twenty to thirty belts. If power users could only be induced to keep a record of the time lost in lacing belts, and notice the loss of power occasioned by poorly-laced belts, they would be astonished at the result. No one man in a hundred can properly lace a belt, and even that man will often ruin a belt or shorten its life by carelessness in lacing it, and the belting bill is thus increased. With the merits of the Smith Belt Fastener, once known among belt users, there will be less complaint about poor belts. For the information of the general public, we call attention to the fact that a separate size is made for each kind of belting. No. 4, as shown herewith, is intended for leather belts, No. 3 for rubber belts, No. 2 for cotton belts and No. 1 for large drive belts. Extra long rivets are furnished when double belts are used. The cuts show also the appearance of a belt fastened with this fastener.

It is an unquestionable fact that this fastener is coming rapidly to the front, and that it is displacing other methods of fastening belts. It is matter of congratulation that the agency for it is in the hands of Messrs. Thornburgh & Glessner of Chicago, who will, no doubt, push its sale. They have on file in their office numerous letters from prominent belting users and experts, which bear testimony to the statements made above in regard to the merits of the contrivance.

THE AGRICULTURAL DEPARTMENT'S REPORT.

The statistical report of the Department of Agriculture for September presents a heavy reduction in the condition of cotton, corn and potatoes, with little change in the status of wheat and other small grains.

There is a further loss in the condition of maize from 80.5 to 72.3 per cent., four points lower than last year's crop in September. The memorable crop failure of 1881 was indicated by 60 in September and 66 in October, some improvement having resulted from more favorable conditions. The depreciation is nearly all in the West. The states of the Atlantic coast and those of the Gulf report larger crops than those of last year already beyond the reach of disaster. In the seven corn-surplus states the average of last month was 74, and is now 64. The figures are: Ohio, 63; Indiana, 61; Illinois, 57; Iowa, 78; Missouri, 67; Kansas, 42; Nebraska 72.

The average of New York and Pennsylvania is 96; of Georgia, 94; of Texas, 88; of Tennessee, 80; and of Kentucky, 60.

The average condition of winter and spring wheat when harvested is 82; last year, 87.8; in 1885, 72.

In the spring wheat region Dakota returns 89, a small gain; Minnesota and Wisconsin, 72; Iowa, 71, and Nebraska, 76, a slight reduction from last month. The increase in acreage will make the difference still less between the present crop and that of 1886.

The average for rye is 82.2; that of oats, 83.4, against 85.6 last month, showing a slight decline. The average for barley is 83, against 86.2 last month. A reduction in buckwheat has occurred, from 99 last month to 89.

THE HESSIAN FLY.

This destructive insect which it is said was first introduced into America by the Hessian troops during the revolutionary war, and which has been the enemy of the farmer ever since, has during the past year made itself known in Great Britain. At least the first record of its appearance there was made in 1886, although it was probably to be found in small quantities before that date. This year, however, its ravages have become apparent and the attention of farmers and scientists has been called to the necessity of some active measures for preventing its increase. Various plans have been suggested, such as burning over the fields after the crop has been harvested; replacing the wheat, barley or rye with a crop of oats, which plant the fly does not molest; and also of depending on a parasite which is found in the pupa of the fly and which destroys it before maturing. Great anxiety is felt in England on the subject, and also in Scotland, where it has been discovered at work in several counties.

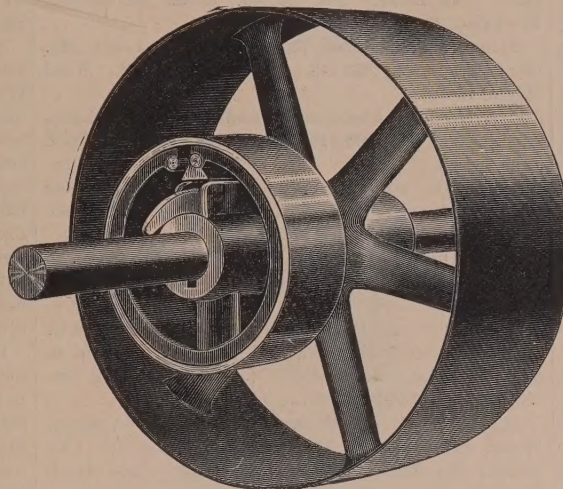
THE HILL FRICTION CLUTCHES.

While the friction clutches are in use in many of the largest mills, manufactories and electric light plants in this country, perhaps they are new to many of our readers, and a brief description of them will not be without interest. The Hill Clutch as manufactured by the Hill Clutch Works, of Cleveland, Ohio, is made in two styles—"A" and "B." The "A" style of clutch has been in the market several years, and although it has only been manufactured in a small way under shop rights from the inventor, it has displaced a great many clutches of other makes, and is claimed by the manufacturer to be superior to any other clutch in the market.

The Hill Clutch Works, of Cleveland, Ohio, recognized the great merits of this clutch, and also the fact that if it was to receive proper recognition in the market, and give perfect satisfaction to the user, it must be manufactured in a very careful, accurate and uniform manner. With this end in view they erected in the latter part of 1886 a plant, which they equipped in the most thorough manner in every detail for the exclusive manufacture of Hill Clutches. And they are to-day in a position to guarantee all the work they turn out in every particular. This work is under the personal supervision of Mr. H. W. Hill, the inventor and patentee.

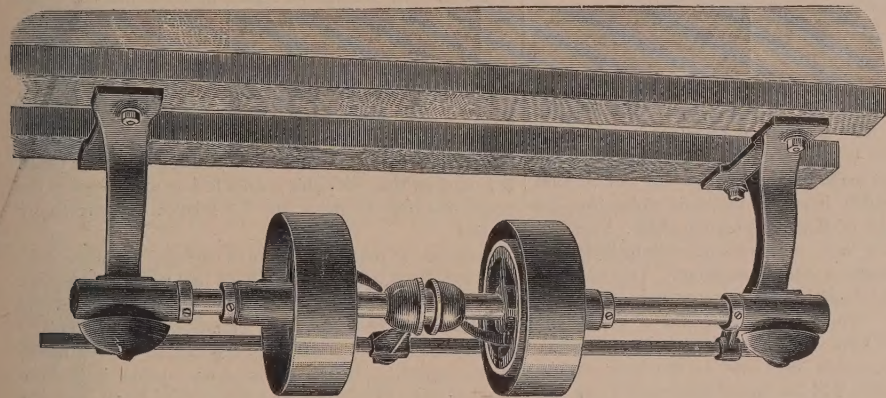
The Hill Clutch "A" is made with either two or four arms, according to the amount of power to be trans-

favor on account of its extreme simplicity. This clutch supplements the "A" clutch, which is only made as small as eighteen inches in diameter, while the "B" clutch is made as small as six inches in diameter. The operation



NEW CLUTCH "B."

of this clutch can be seen at a glance, it is so very simple. The clutch consists of an outer and inner ring. The outer ring is sometimes cast into the arms of the pulley, or, as

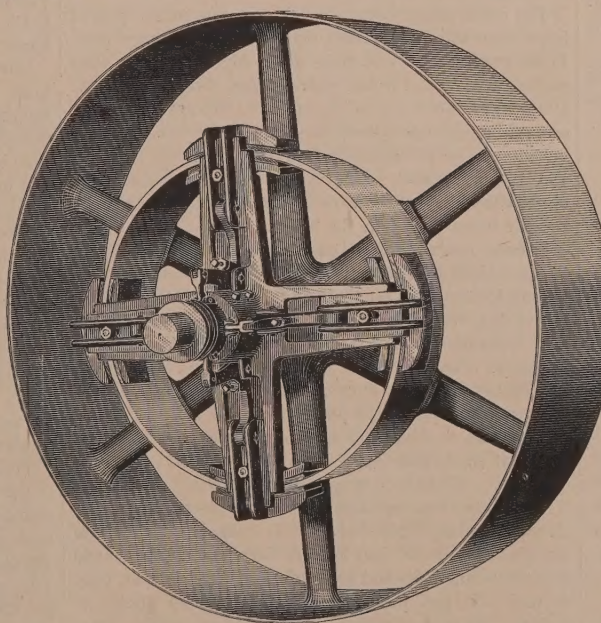


FRICTION CLUTCH PULLEYS AND COUPLINGS.

mitted. The "A" clutch pulley, as shown in our illustration, has a clutch ring cast (not bolt) onto the arms of the pulley. This ring is turned and finished absolutely true, and is grasped on the outer and inner sides by the eight clutch members, which are shod with thoroughly seasoned maple. The radial motion of the jaws or clutch members is produced by the sliding collar (seen to the left of clutch) being pushed up toward the clutch, operating the link and two angle levers with which it is connected, with the clutch jaws in such a manner as to force the outer jaws inwardly and the inner jaws outwardly, until they grip firmly both sides of the ring, and also so that the sliding collar cannot be kicked out. By moving the sliding collar out by means of a long lever attached to it, the jaws or frictional surfaces are instantly disengaged. The clutch is operated very easily, and without start or jar to the machinery, and is key-seated securely to the shaft. The pulley, of course, runs loose on the shaft. It is nicely finished and accurately balanced, and fitted with an automatic grease cup and the Hill patent removable sleeve or bushing, which for high speed is babbitted with the best Babbit metal. The great value of a sleeve of this kind in a loose pulley is evident, and is also shown by the number of imitations that have followed it. The slight wear to the wood jaws is taken up by set screws, and when worn out can be replaced.

All parts of these clutches are made strictly to gauge, and duplicates of any part may be ordered by number to take the place of those worn out or broken by accident, and the new parts will fit in their place as perfectly as the old ones. The interchangeability of all like parts of these clutches is a guarantee of their careful and accurate workmanship, and is something new in the clutch business.

The new Hill Clutch "B" shown herewith has been on the market only a short time, but has met with great



STANDARD CLUTCH "A."

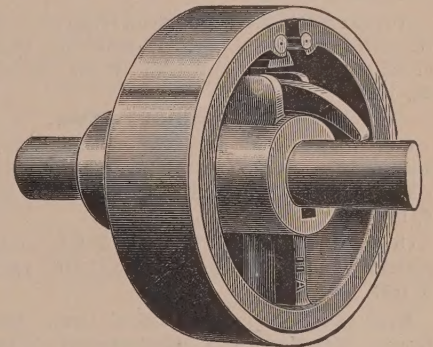
clutch is operated by means of a sliding collar being pushed up against the small lever. In this way the small lever forces up a wedge which expands the inner ring against the outer ring, holding the same securely. The clutch is fitted up with an automatic grease cup which lubricates the frictional surfaces and prevents wear, but this does not in any way prevent its holding firmly.

As stated above, this "B" clutch can be manufactured as small as six inches in diameter, and in consequence of this, and the fact that it can be made very cheaply, is well adapted for use on countershafts, of which we give a good illustration. Friction clutch cut-off couplings are made in both the "A" and "B" styles. A description of them would, however, be only a repetition of the above. We give herewith an illustration of the "A" couplings.

Although the Hill Clutch Works have been in operation but a short time, the high standard of their work has become widely known, and they are now preparing to double the capacity of their works to take care of their increasing trade. These parties state that they contract to put in entire plants ready for steam, and that they have now in hand several very large electric plants which they are putting in according to their own designs.

THE CORNSTALK COLUMNS AT THE CAPITOL.

Perhaps few of the visitors to the Capitol at Washington have ever noticed the columns standing in the lower vestibule of the senatorial department, and which a writer in the *American Magazine of History* asserts are the only truly American columns in existence. He goes on to say that these columns were designed by Benjamin Henry Latrobe in 1809, at the instigation of Thomas Jefferson, who, in speaking to the architect of



CLUTCH COUPLING.

the lack of individuality in our public buildings, asked why he did not conventionalize some of our native vegetation into appropriate columnar designs.

Acting upon this suggestion, Latrobe produced these columns which represent a cluster of Indian cornstalks bound together so that the joints of one stalk stand slightly above the preceding one, thus giving a spiral effect. The capitals are composed of the ears with half-open husks displaying the corn. It is said that when Mrs. Trollope looked at these columns she pronounced them the most beautiful things she had seen in America. It is certainly time that our painters, sculptors and architects were producing something original and in keeping with our independence of thought as a nation. Why should we not begin to set the fashion for columns and frescoes and statuary as well as the ancient Greeks and Romans whose ideas we have followed so long?

What magnificent models for cornstalk columns would the luxuriant growth of Kansas or Nebraska afford, and why could not the pumpkin vine and its golden fruit furnish as graceful a capital as the well-worn idea of the Corinthian, which is about the only one we know. Is there anything more graceful than the wheat sheaf with its plume of ripened grain, or the nodding heads of rye and oats? And while we are about it, let us discard the ugly, awkward, disagreeable bird which has so long stood on our shield and our dollar, clutching a bundle of arrows, and which we know only through our cabinets of stuffed specimens, and adopt our really national bird, the turkey, with his crimson crest and shining bronze and golden feathers, the bird who is dear to the heart of every American citizen.

Let us be nothing if not national and original.

The *Northwestern Farmer and Breeder* says that before long all the warehouses and elevators in Dakota will take out licenses and give bonds for storing grain,



Issued on August 16, 1887.

BELT FASTENER.—Theodor Remus, Dresden, Saxony, Germany, assignor of one-half to Jean Scherbel, same place. (No model.) No. 368,423. Serial No. 230,607. Filed March 12, 1887.

SPECIAL CONVEYOR.—Hans Birkholz, Milwaukee, Wis., assignor to Edward P. Allis, same place. (No model.) No. 368,182. Original application filed Oct. 4, 1886. Serial No. 215,312. Divided and this application filed March 11, 1887. Serial No. 230,513.

GRAIN DRYER.—Joseph H. McDonald, New York, N. Y. (No model.) No. 368,298. Serial No. 219,836. Filed Nov. 24, 1886.

CORN SHELLER.—Benjamin M. Root, York, Pa. (No model.) No. 368,356. Serial No. 211,771. Filed Aug. 24, 1886.

MEANS FOR ELEVATING GRAIN.—Gust Romweber, Minneapolis, Minn. (No model.) No. 368,242. Serial No. 219,521. Filed Nov. 20, 1886.

AGITATING ROTARY DRYER.—Hiram V. Reed, Chicago, Ill. (No model.) No. 368,237. Serial No. 197,189. Filed March 30, 1886.

AUTOMATIC GRAIN WEIGHING APPARATUS.—John E. Simpson and James H. Shaffer, Butlerville, Ohio. (No model.) No. 368,310. Serial No. 231,927. Filed March 22, 1887.

Issued on August 23, 1887.

CANAL LOCK.—Theodore Sidensol, La Crosse, Wis., assignor of one-half to C. L. Halstead, same place. (No model.) No. 368,860. Serial No. 233,951. Filed April 6, 1887.

CAR STARTER.—Joseph R. Tracy, Toledo, Ohio. (No model.) No. 368,695. Serial No. 237,291. Filed May 5, 1887.

MACHINE FOR REDUCING CEREALS, ETC.—Nathlie T. Ryerson, New York, N. Y., administratrix of Van Buren Ryerson, deceased; said administratrix assignor to Joseph S. Hall, same place. (No model.) No. 368,900. Serial No. 208,760½. Filed July 22, 1886.

MANUFACTURE OF CONVEYOR FLIGHTS.—Oliver Caldwell, Chicago, Ill. (No model.) No. 368,569. Serial No. 223,273. Filed Jan. 3, 1887.

AUTOMATIC GRAIN SCALE.—Benjamin R. Foster, St. Louis, Mo. (No model.) No. 368,662. Serial No. 220,537. Filed Dec. 2, 1886.

GRAIN WEIGHING SCALE.—Charles A. Lieb, New York, N. Y., assignor to Zinn & Kayser, same place. (No model.) No. 368,840. Serial No. 218,788. Filed Nov. 13, 1886.

Issued on August 30, 1887.

BALING PRESS.—Chas. E. Whitman, St. Louis, Mo. (No model.) No. 369,306. Serial No. 236,990. Filed May 3, 1887.

BALING PRESS.—Lorin Wright, Dayton, Ohio. (No model.) No. 369,149. Serial No. 235,196. Filed April 18, 1887.

DRIVING-BELT FASTENER.—Isaiah Newell, Haverhill, Mass. (No model.) No. 369,023. Serial No. 233,404. Filed April 2, 1887.

COMBINED BELT-SHIFTER AND BRAKE.—Jeremiah Casey, New York, N. Y. (No model.) No. 369,228. Serial No. 242,510. Filed June 25, 1887.

GRAIN SEPARATOR.—Chas. M. Gilbert, Minneapolis, Minn. (No model.) No. 368,939. Serial No. 221,081. Filed Dec. 9, 1886.

COUNTER BALANCE FOR GRAIN SEPARATORS.—Chas. M. Gilbert, Minneapolis, Minn. (No model.) No. 368,940. Serial No. 225,809. Filed Jan. 28, 1887.

AUTOMATIC GRAIN WEIGHING MACHINE.—Chas. J. Hartley, Decatur, Ill., assignor of two-thirds to John K. Warren and Bradford K. Durfee, both of same place. (No model.) No. 368,946. Serial No. 228,062. Filed Feb. 18, 1887.

Issued on Sept. 6, 1887.

BALING PRESS.—Daniel Bromley, Carrollton, Ky. (No model.) No. 369,582. Serial No. 215,598. Filed Oct. 7, 1886.

BALING PRESS.—John La Dow, Denver, Colo., assignor

to Gregg & Co., Trumansburg, N. Y. (No model.) No. 369,454. Serial No. 223,995. Filed Jan. 11, 1887.

BALING PRESS.—E. Fowler Stoddard, Dayton, Ohio, assignor to the Farmers' Friend Manufacturing Co., same place. (No model.) No. 369,662. Serial No. 222,393. Filed Dec. 23, 1886.

BALING PRESS.—Chas. E. Whitman, St. Louis, Mo. (No model.) No. 369,573. Serial No. 236,989. Filed May 3, 1887.

CAR MOVER.—Alexander Stockdale, Wolcott, Iowa. (No model.) No. 369,413. Serial No. 240,599. Filed June 7, 1887.

APPARATUS FOR UNLOADING GRAIN BOATS.—Luke Messier, Schenectady, N. Y. (No model.) No. 369,460. Serial No. 194,219. Filed March 6, 1886.

GRAIN DRIER.—Joseph H. McDonald, Brooklyn, N. Y. (No model.) No. 369,607. Serial No. 211,412. Filed Aug. 20, 1886.

HORSE POWER.—Frederick Hohlfelder and Varnum F. Carpenter, Cleveland, Ohio; said Carpenter assignor to said Hohlfelder. (No model.) No. 369,449. Serial No. 226,465. Filed Feb. 3, 1887.

AUTOMATIC GRAIN WEIGHING MACHINE.—Valentin Weber and James R. Harrison, Princeville, Ill. (No model.) No. 369,486. Serial No. 232,510. Filed March 26, 1887.

TRADE IN THE SOUTHWEST.

[Special correspondence AMERICAN ELEVATOR AND GRAIN TRADE.]

KANSAS CITY, Sept. 10, 1887.

This has been one of the quietest months in grain and elevator circles that has been noticed for many a year. During the month there was but one lot of wheat sold on the Board of Trade of the No. 2 red order, while for No. 2 soft sales have been as near nominal as possible. If there is an elevator in the city that has made more than expenses it has not made itself known. The fact is that those elevators which have the railroads going through the best wheat fields of Kansas backing them, have not been able with their best endeavors to put into their bins even enough to make a decent showing. Yet, notwithstanding this state of affairs, the elevator men are feeling by no means dull. They are looking for a good time coming, and they have worked themselves up to believe almost to a certainty that 1888 will be the lucky season for them, when they will be more than repaid for the efforts they have put forth for this market. Candidly it is only justice to say that unless they follow an entirely different course from what many of them have in the past, they will still discover that the country people have not danced to their piping.

Too much stress cannot be laid on the importance of inspections after the manner desired by the country man. If the great majority of them desire high inspection they should have it, and if the contrary they should have that. Of course it would be ruinous to have two systems at the same time—neither is there any call for it—but whatever is had must be to the satisfaction of the greatest number; and this, it is feared, cannot be had so long as some of the old mossbacks in power have been gently laid on the shelf, and the sooner it is done the better.

I have known many cases of where Kansas parties shipped direct to Chicago when they knew that they were getting lower prices for their grain, just because they believed they would be cheated in the inspection here. I have in mind a leading farmer from the neighborhood of Emporia, who has sent his grain here and that of his neighbors for years. During the past two years he has frequently complained of the injustice he suffered at this market, and as often has been promised relief, only to find out that this relief was a myth—an unknown quantity. Chicago now gets all his grain. When the Northwestern Railroad tapped the counties of Nebraska, there were many little dealers who came here to try and see what this market had in store for them. They made their first shipments and some of them their second, only to find that the inducements offered were apples of Sodom. At present their consignments go north. Consignments from Southern Missouri should reach here right along. The Kansas City market has been tried, and now St. Louis gets about every bushel of wheat grown in those counties.

It won't do to argue that there are not enough mills in Kansas City to justify this city in becoming a leading center for winter wheat. Flouring mills never did build up a city of themselves. There is a grave evil. Public confidence is shaken and there must be some remedy

given out, or Kansas City might as well throw up the sponge. The new Board of Trade hall, though it is to cost a half a million, will not be the salvation of this market. The only solution of the whole difficulty is the kicking out of the ancient mossbacks, whose bickerings and dissensions are simply disgusting.

Kansas mills have not nearly enough wheat in that state to supply themselves this year and until the next crop comes to hand. They are already making shipments from the north and are adapting themselves in many cases to the use of spring wheat instead of winter. Once in a while an order comes in here, but it is not possible to fill such nine cases out of ten. The visible supply has reached to about the largest quantity that has been in the elevators for six months past, and the light receipts continue to increase this supply, the shipments being quite light to the country and the local mills in most cases making their consignments either directly from the country or from the northern grain centers.

By the way, there have been no improvements made in the elevators of the city the past nine months. It would be useless to attempt anything of the kind with the present limited output. Several of the larger plants promise that they will make changes next year, however, and all these will be for a better class of machinery, so that it is promised that there shall be some of the best elevators here in the country. I have not heard of any new companies that it is proposed to form for the construction of new plants. The advisability of doing this does not make itself apparent. The average dealer will be satisfied if Kansas City manages to regain what she has lost in the way of grain the past three years. The present elevators were built for a trade that was twice as large as that which now comes here.

The habit which many grain commission men have gotten into of trading after call is not the best one imaginable. There is no use of having a daily session of the call board if members are unwilling to make deals. It is noticed that the habit results in loss of interest in the Board and that at times the attendance is distressingly limited.

There are at present in store in the city elevators 370,026 bushels of wheat. During the past month there have been 229,938 bushels received as compared to 351,349 bushels for the corresponding month last year. This is slightly in excess of what was expected at the beginning of the month. However the news comes in that the visible supply in Kansas is getting quite small, and the local mills are contracting for all the wheat in their different neighborhoods. The total receipts to date for the year 1887 have been 833,406 bushels as compared to 1,302,315 bushels for the same time last year. No. 2 soft wheat is selling now at 65½ cents as compared to 64 cents at the opening of the month. The only sale made of No. 2 red was on Aug. 11, when a lot sold at 64 cents.

Corn is being harvested all through Kansas and Missouri, but the promises for a liberal yield are slim. It is thought, however, that it will be much better than was thought before the late rains were had. If the same had been experienced three weeks earlier Kansas would have had her average crop. As it is now she will have about enough to use at home, and in some localities shipments can be made without making the shortage very alarming. For the month the receipts have been 100,276 bushels as compared to 346,838 bushels the same time last year. This makes the total receipts by elevator to date as being 757,025 bushels since 1886, when last year there were 1,432,915 bushels received—a most decided falling off. Values opened at 36 cents for No. 2 and closed at the same price. The lowest value was reached on Aug. 18, when values were held at 34½ cents, and the highest point was attained on Aug. 10, 37½ cents.

The supply of oats is short of the demand and has been so right along. Local dealers have to send direct to the country for their supplies. For the four weeks there have been 84,333 bushels brought in as compared to 159,596 bushels for the corresponding four weeks during 1886. This makes the total offerings from elevators for this year 215,498 bushels as compared to 176,114 bushels last year. Thus it will be seen that the receipts at the opening of the present year were greatly in excess of what is now coming to hand. No. 2 cash sells just now at 23 cents.

The Minneapolis Bank of Commerce has been sued by a number of farmers for several thousand dollars worth of wheat which they sold to the now defunct firm of Meader & Co. The bank holds the storage certificates as security for loans made to Meader & Co.

THE BIG DAKOTA WHEAT FARMS.

A correspondent of the New York Times, writing from Casselton, Dak., says of the wheat-raising on the immense farms in that territory: "It is hard, continuous work. Self-binding machines, drawn by three strong horses, roll around and around the wheat fields, throwing with an iron arm a bound bundle of wheat every ten feet. Behind the machines walk a line of shockers, a shocker to each machine. These men have to walk as fast as the horses, and bend over and pick up a heavy bundle of wheat every ten feet and carry it to a shock. And behind them, also, rides a foreman to see that they do their work promptly. And above them blazes the fiery Dakota harvest sun. During threshing it is the same. The steam thresher never tires. The men who pitch bundles in the field have each to pitch a certain number of wagons. The men who drive have to unload their wagons. The men who feed the straw into the iron-toothed mouth of the machine have to feed all that is brought to them. On one side of the machine the grain pours out of a spout, and is loaded directly into wagons and hauled to the garner. There are just sufficient men to do the work. For twelve hours every day they work laboriously, and are driven steadily by hard-faced foremen. It is not farming. It is the manufacture of wheat which is being carried on." He thinks the system is detrimental to the best interests of the country, just as monopolies and syndicates are, although he admits that with the growing Indian competition such a plan of operations seems to be necessary. The effect upon the country surrounding these great farms is not beneficial. "When they flourish, trade languishes, towns cease to grow, merchants are forced out of business, and schoolhouses are empty. There are no children in that land. For a month in the spring and for forty days in the summer and fall, the air hanging over the bonanza farms resounds with the hum of industry. Then all is silent, and the country is desolate until the next spring. But wheat has been produced cheaply, though no happiness has followed, as it legitimately should, to the men who tilled the soil." A tabulated table is given of the cost of raising twenty acres of wheat on a farm which is well managed, which shows the cost at the farm to be 21 cents, which with freight added will be 48 cents by the time it reaches New York. At 60 cents a bushel the farmer can clear 12 cents a bushel.

AN ANCIENT HARVESTER.

The reaping machine so generally used in America, and brought to such high perfection in its working parts, is in its cutting apparatus only an improvement on the invention of a Scottish minister of Forfarshire, whose machines were brought out under the auspices of the Highland and Agricultural Society in 1826. But reaping machines were in use—and had gone out of use, lost with an earlier civilization—long centuries before the day of the Forfarshire minister. Pliny tells us that on the extensive plains of Gaul the grain was cut by a large, hollow machine with teeth fixed in the fore part and pushed forward on two wheels through the standing corn by an ox yoked to the hind part; the ears cut off by the teeth falling into the hollow part of the machine. A more particular description of this implement is given by Palladius:

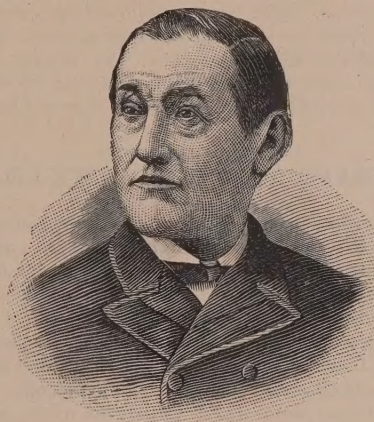
"In the plains of Gaul," he says, "they use the quick way of reaping, and without reapers cut large fields with an ox in one day. For this purpose a machine is made, carried upon two wheels. The square surface has boards erected at the sides which, casting outwards, make a wider space above. The board on the fore part is lower than the others; upon it there are a great many small teeth, wide set in a row, answering to the height of the ears of the corn and turned upward at the ends. On the back part of this machine two short shafts are fixed, like the poles of a litter. To these an ox is yoked, with his head to the machine, and the yokes and traces likewise turned the contrary way, well trained, and who does not go faster than he is driven. When this machine is pushed through the standing corn all the ears comprehended by the teeth are heaped up in the hollow part of it, being cut off from the straw, which is left behind, the driver setting it higher or lower, as he finds it necessary; and thus, by a few goings and returnings, the whole field is reaped."

This description undoubtedly inspired the invention of the modern reaper. At all events, the work of Rev. Adam Dickson on the "Husbandry of the Ancients," in which the various methods of reaping grain are detailed, was published at Edinburgh in 1788, and, at least, nine new reapers were brought out by British inventors at intervals

in the succeeding twenty four years, nearly all of which were set in motion from the rear. And even at the present time the California header is so propelled, and differs from the old Gallian reaper mainly in the greater perfection of its cutting parts.

WM. DRESBACH.

The name of Wm. Dresbach has become well known all over the country on account of his connection with the late "busted" California wheat corner. What seems strange is, that the chief manipulator of the corner should also be president of the San Francisco Produce Exchange, but such is nevertheless a fact. Mr. Dresbach is a Swede and is sixty-two years old. He was the protegee of old



Friedlander, who for years was the wheat king of the Pacific coast. For several years Mr. Dresbach has been the heaviest operator on the San Francisco Call Board. The story of the recent corner has been told and retold and at last it appears that whatever support Dresbach and Rosenfeld may have received from Mackay and Flood, they were the real principals in the gigantic corner in which the losses were so heavy. Mr. Dresbach by his coolness and nerve has earned the title of the "Iron Man."

THE CALIFORNIA WHEAT DEAL.

The mammoth wheat deal, which had its "rise and fall" in San Francisco, is said to be with the exception of the recent Chicago deal, without a parallel in the history of the wheat trade. Contrary, however, to the usual result in such great speculations, the disastrous effects have been felt principally by two men, whom later events have shown as the prime movers of the whole scheme. These are the bonanza kings, Flood and Mackay, who, until the final collapse, had concealed their hands so well behind substantial figures of Dresbach and Rosenfeld, two well-known speculators, that they were only suspected of assisting by loans made by the Nevada Bank which they own. It is believed that the millionaires have been losing heavily in various ways during the past three years, and the following seems to have been the plan laid to retrieve their losses:

To first corner every bushel of wheat that was to be secured in Chicago, always, of course, working under figureheads so that their identity should not be known. When wheat reached \$1 a bushel to unload, and with the profits of \$2,500,000 which they expected to make, to boom all the Comstock and other mining shares here, and give San Francisco such a stock excitement as it had not enjoyed since 1876. To throw three or four millions into the moribund stock market, they knew would give an immense upward tendency to everything from a legitimate mine to the merest "wildcat." From this deal they confidently expected to clean up \$5,000,000. This was to be accomplished by the Fourth of July. Then, flushed with triumph on both fields, they would rush into the wheat ring in San Francisco, force grain up to an unexampled figure, and by cornering the whole supply of old wheat force all the "short" brokers to agree to their own terms before the new wheat came in. Nothing less than \$6,000,000 was expected from this deal.

It was a mighty pretty scheme, and with the knowledge of the large capital of the Nevada Bank it did not seem impossible to accomplish it. Here were three deals to be made in quick succession, from which between thirteen and fourteen millions were to be cleaned up and divided between the two big manipulators. But their bad luck for three years followed them this season. First came the

unexpected collapse in Chicago. The Nevada Bank clique had worked so successfully in secret that they were able to cover up their losses, but the losses were there nevertheless and amounted to so large a figure that the mining stock deal in early July was wholly abandoned. There was a slight rise in Belcher and Crown Point, but these stocks soon slumped down again and the line of stocks held by the millionaire operators merely recorded the ordinary fluctuations. It was a deep disappointment to those who invested in stocks on inside information, but these dupes were encouraged to hold on until after the wheat deal, when the great stock boom would take place.

Meanwhile, the representatives of the Nevada Bank—William Dresbach and John Rosenfeld—were buying all the wheat in sight. Some of this was purchased below \$1.50 per cental, but the greater part ranged from \$1.60 to \$2.00 per cental, a price which could only have been justified by a failure of the crop, a war with Europe, or some such extraordinary state of affairs.

Members of the Produce Exchange were amazed, and rumors were afloat that the Nevada Bank was favoring the speculators with heavy loans. The attention of the Bank examiners was called to the matter, and on inquiry they found that Dresbach had obtained an advance of between one and two millions with no apparent security. Being pressed on the subject, the manager of the bank produced the written guaranty of John W. Mackay that he would be responsible for all loans made by the bank to William Dresbach, and the same kind of a document was found signed by James C. Flood that he would be responsible for all loans made to John Rosenfeld. So these two speculators went on buying up the wheat crop of California, and the subsidized newspaper organs of the Bank of Nevada continued to declare that the deal was on so sound a basis that nothing could shake it, although at the same time wheat was 50 cents higher than in Chicago and 75 cents higher than in Liverpool.

Meanwhile the demands on the bank for coin to buy the immense quantities of wheat offered to the ring were so great that Flood was forced to get loans from his intimate personal friends on gilt-edged securities for collateral. With these alone could he secure any advances from other banks, whose managers feared the entire collapse of the wheat ring. This was the desperate situation of affairs behind the scenes while Dresbach and Rosenfeld paraded through the call board and bought every bushel of wheat offered to them.

The price went up from \$1.70 to \$1.90; then to \$2, the point which had been decided on as the ultimate limit of the deal. But still the wheat came pouring in, and to prevent the filling of short contracts the price was shoved up higher. Day by day it rose, each advance seeing the shorts turn over heavy cash payments to Dresbach for margin. This money was at once used to buy more wheat, and so the process went on. To guard against any possibility of defense on the part of the shorts, Dresbach secured the amendment of a rule of the Produce Exchange, and it was ordered that no wheat should be sold in less than 100-ton lots, and that cash should be paid on delivery. This was a complete knock-out for the dealers, and put them at the mercy of the ring. Thousands of dollars were put up to satisfy margins, yet still the price was advanced. On July 30 it touched the extraordinary price of \$2.15, and on the Monday following it reached \$2.17 per cental, or fully 20 per cent. above its present price in the English market. Brokers stood aghast, and all predicted a crash which would rival the collapse at Chicago.

The end came on Aug. 3, when a panic was only averted by the coolness and judgment of the big bear operators, who agreed to the compromise offered by Dresbach and Rosenfeld. This was that an extension of time be granted on Call Board contracts, for which they agreed to pay 10 cents per cental to sellers, and to take delivery from sellers in monthly lots of one-quarter each, at \$1.70 per cental. As security for this margining down they agreed to deposit 10,000 bushels of wheat, the proceeds to be paid to sellers should they default on their margins. This compromise was accepted by all but a few brokers, and it was hoped a crisis would be averted. The crash came, however, when it was clearly shown who was the power behind the throne, and Flood & Mackay were left to shoulder the losses which will foot up to the neat little sum of between \$6,000,000 and \$8,000,000. A sale of 6,000 tons of wheat for the benefit of the creditors of Dresbach and Rosenfeld took place the first of September, at which the first 100 tons sold at \$1.23¼ per cental, the succeeding 300 tons at \$1.22¼, after which the price rose quickly to \$1.25, and the final sales were made at \$1.27.

These prices were considerably higher than had been deemed possible.

What the outcome of all this trouble will be to the men who risked so much is yet to be seen. James C. Flood is prostrated with an incurable disease, and John W. Mackay was called from Paris to his sick bed. The latter keeps a stiff upper lip, although it is asserted he can scarcely stand up under the burden imposed upon him.



[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interests of the trade at large, or any branch of it.]

DISSOLUTION OF PARTNERSHIP.

Editor American Elevator and Grain Trade:—The firm of Scott & Hoadley was dissolved Aug. 1. Mr. Scott continues the business here, the same as at Duncan. He resides at Duncan, and will run this point in connection with his home place. If I were continuing here I would surely renew my subscription to the AMERICAN ELEVATOR AND GRAIN TRADE, as I couldn't get along very well without it. Yours truly, T. HOADLEY.
Monica, Ill.

FINDS IT INDISPENSABLE.

Editor American Elevator and Grain Trade:—Inclosed please find renewal of my subscription to your paper. Should have sent sooner but have just returned from the seashore, and on looking for the August number I find that my subscription has elapsed, consequently no paper. I cannot get along without it, so please mail the August number promptly and oblige, Yours truly, ROBT. D. EATON.
Norwich, N. Y.

A NEW ELEVATOR.

Editor American Elevator and Grain Trade:—We have the contract to rebuild the elevator of W. H. Graddy & Son, of Versailles, Ky., which collapsed Aug. 9 with 80,000 bushels of wheat. We furnished the machinery for the old elevator about a year ago, and have been awarded the contract to furnish the plans and build a 150,000-bushel elevator on the site of the old one. The machinery and elevator complete will cost about \$18,000. Yours truly, W. E. CALDWELL & Co.
Louisville, Ky.

A VETERAN CHICAGO ELEVATOR MAN.

Hiram Wheeler, who is the oldest member of the Board of Trade, and the founder of Chicago's unsurpassed elevator system, and the head of the Munger-Wheeler elevator system, celebrated his seventy-eighth birthday Saturday. Although old in years, Mr. Wheeler feels as young as many men of fifty, and to look at his clean-shaven face and bright eye one would think him about that age. He is one of those men who grow old in manners while his heart is as young as that of a youth of twenty-one. His cordial way of greeting young and old members has made him deservedly popular with both. He is a typical picture of a grand old gentleman.

Nobody has watched the Board of Trade and the grain business of Chicago grow from nothing to be the largest in the world, or knows more about the early history of the grain trade in the West, than Hiram Wheeler. He has been actively engaged in it since 1833. Thirty-two years ago he was president of the Board of Trade, being the sixth to fill that office.

Mr. Wheeler is a native of New York, but has been in the West since 1832. He first located at Niles, Mich., and next at Laporte, Ind., in 1833, where he ran a general store and bought and sold grain. Money was scarce in those days, and merchants were obliged to trade goods for grain, and when they had accumulated what in those days was considered a large stock—but now would be nothing but a jag—they shipped it East in bags or sold it to immigrants. When Mr. Wheeler came to Chicago the

warehouses were small, rude affairs, and the grain had to be carried in and out in bags or baskets. This was too slow for him, so he constructed quite a large warehouse, and began devising facilities for handling grain cheaper and more easily. The old fogies thought the progressive young grain trader too rapid, and begged him to desist from what they termed a ruinous undertaking. He only laughed at them, and kept on in his go-ahead way and achieved a splendid success and amassed a large fortune.

His four sons have been brought up in the elevator business. His oldest son, Fred, has an elevator at Baltimore, but Charles W., Eugene and George Henry are with him here, and it is almost a daily occurrence to see the sons and the father together discussing business matters on 'Change. All admire the family, and well they may, for their reputation is as white as the hair on the old man's head. After a successful business career of over fifty years, few men can show such a record as Hiram Wheeler's. Many say to him: "Mr. Wheeler, why don't you retire?" His invariable reply is: "I would rather die in the harness. It is better to wear out than to rust out."

MINNEAPOLIS STILL IN THE LEAD.

The statistics for the crop season which has just ended show that Minneapolis still retains the lead as the primary wheat market of America. Her total receipts of wheat for the crop year of 1886 foot up nearly 40,000,000 bushels, which is 12 per cent. increase over 1885. It is estimated that about 100,000 bushels were sent to Chicago in May and June on account of the fictitious prices there, which would otherwise have gone to Minneapolis. The receipts of flour were almost entirely of winter wheat grades for the use of Minneapolis bakers, and the total production of the mills about 150,000 barrels greater than the receipts and shipments, the excess going into local consumption. The following tables, prepared by Secretary Sturtevant, of the Chamber of Commerce, may be relied upon as being absolutely correct:

WHEAT RECEIPTS—BUSHELS.

	1886-'7.	1885-'6.	1884-'5.	1883-'4.
September.....	3,971,000	2,685,760	3,004,000	1,925,560
October.....	4,428,050	7,138,320	5,001,360	3,193,927
November.....	5,569,550	4,073,440	4,145,120	2,784,457
December.....	4,545,750	2,472,960	3,431,680	1,910,460
January.....	2,527,280	1,918,560	3,438,960	1,411,760
February.....	2,154,880	2,268,560	1,735,446	1,240,400
March.....	3,706,640	2,222,640	2,066,400	2,145,920
April.....	2,390,080	1,788,140	2,582,720	2,008,720
May.....	2,924,880	2,081,750	2,654,400	2,297,680
June.....	2,744,560	2,350,150	1,642,680	1,826,680
July.....	2,255,680	1,939,850	1,282,400	1,445,360
August.....	2,030,030	1,796,850	1,127,280	1,363,600
Totals.....	39,278,380	32,736,980	32,112,840	23,514,576

WHEAT SHIPMENTS—BUSHELS.

	1886-'7.	1885-'6.	1884-'5.	1883-'4.
September.....	585,200	477,680	238,960	20,489
October.....	707,850	713,440	688,000	542,500
November.....	1,321,000	621,040	1,015,840	594,000
December.....	1,332,100	414,960	829,600	356,000
January.....	505,680	195,440	438,480	255,900
February.....	381,920	283,920	370,720	250,320
March.....	1,469,440	435,120	375,760	236,320
April.....	724,680	349,380	368,480	236,320
May.....	1,080,240	466,950	319,760	183,680
June.....	1,452,080	294,350	211,120	179,200
July.....	368,480	354,750	278,880	186,480
August.....	966,560	222,200	353,920	191,520
Totals.....	10,894,730	4,929,430	6,584,430	8,132,749

As compared with Duluth the excess of receipts at Minneapolis was 19,633,315; with Chicago, 14,946,352; with Milwaukee, 31,087,320 bushels.

Of flour Minneapolis has shipped 6,057,336 barrels, and consumed 300,000, making a total of 6,337,336 barrels. The receipts have been 23,899 barrels, making a total production of 6,333,437 barrels, an increase over last year of 867,756 barrels. Her exports of flour have been 2,572,438 barrels, an increase over last year of 165,648 barrels. The total capacity of the mills is 35,375 barrels, an increase over last year of 2,200 barrels. The capacity of her elevators is 12,340,000 bushels, an increase over last year of 565,000 bushels. The milling business is in a flourishing condition, and the prospects fair for a better state of affairs than for some time past.

Mrs. Brown, widow of one of the victims of the St. Anthony elevator accident, at Minneapolis, has commenced an action against the syndicate who purchased the damaged wheat, to recover damages. It will be remembered that while shoveling away the wheat left from the great fire, the remaining portion of the walls gave way and the men were buried beneath the piles of hot grain.

TRADE AT PHILADELPHIA.

PHILADELPHIA, Sept. 10, 1887.

There is increased activity in nearly all of the distributing markets. Jobbers of manufactured goods of all sorts are getting liberal orders, and in many cases the rush of business is taxing the shipping facilities of distributors. All this indicates the prevalence of a very hopeful feeling among the smaller dealers, whose close contact with consumers has enabled them to make a tolerably accurate forecast of probable requirements. Notwithstanding this current activity in trade, there is a more conservative feeling among the larger manufacturing and wholesale interests and in banking circles, due in part to the closeness of the money market, the recent failures in the coal and iron trade and the fear of unfavorable developments yet to come from recent speculations. The scrutiny of credits is very close, yet within conservative limits business is progressing satisfactorily, and unless disturbed by unexpected happenings, commercial affairs promise steady and healthful improvement as the season shall advance. Anxiety respecting the damage to the growing crops has been allayed in consequence of much more encouraging weather conditions, while uneasiness respecting the future of monetary affairs is not altogether removed, notwithstanding a large importation of gold from Europe, and the Treasury purchases of bonds, for the reason that the money markets generally rule firm, loanable funds are not in abundant supply, and commercial paper is difficult to place at the ruling rates.

Speculation in wheat has been very tame, and there has been no improvement in the demand for export. Prices have been somewhat irregular, but fluctuations have been within narrow limits.

In corn there has been a good local trade demand for spot lots, and prices have ruled firm under moderate offerings. Futures are neglected and nominal.

The oats market has ruled a shade firmer, with a fair local trade demand for car lots, but little or no speculation.

The annual report of the Maritime Exchange, just published, contains much valuable information regarding the commerce of the ports during 1886 and previous years. By the figures given it appears that the value of the imports last year, \$37,997,005, was greater than in any former year, except 1880, when it was \$38,993,832; while the value of the exports, \$33,607,386, was less than any year since 1875. The import duties showed a great increase, from \$13,891,190.61 in 1885 to \$16,182,101.35, an amount much in excess of the figures for any previous year. The statistics of vessel arrivals show that in 1886, 417 American boats, whose tonnage was 127,518, entered from foreign ports, against 433 in 1885. The tonnage for 1886 was far lighter than for any previous year back to 1877. In the tonnage of foreign vessels from foreign ports there was an increase from 770,958 in 1885 to 943,340, and the number of such vessels went up from 743 to 862. Only 1880 showed better figures than these, the number then having been 1,059. There is a sad falling off both in the number and tonnage of American vessels which cleared for foreign ports, the figures being 243 and 143,810. These are smaller than for many years before, and are hardly half of the returns for 1887, when 460 American vessels, of 277,913 tons, sailed away for foreign ports. Both in the coastwise arrivals and clearances the figures seem to show that the commerce of the port is declining. There were 4,531 arrivals and 4,669 clearances, or less than for the last nine years. A table of exports of wheat and corn for the past ten years from Atlantic ports is not pleasant reading for a Philadelphian. It shows that Philadelphia's percentage of the total exports has fallen off from 16.5 in 1878 to 7.2 in 1886. The exports of corn were only 1,857,353 bushels, or 3.2 per cent. of the total. New York has gained, while Boston and Baltimore have lost.

The exports of grain from this port so far this year show a most gratifying increase. The exports of wheat up to this week have been 746,367 bushels, while for 1886 there were but 3,158,307 bushels. The corn shipments for the year have been increased nearly 1,000,000 bushels, with a good demand for the remainder of the year. There is but little demand for oats at any of the ports in the United States. The vessels which have heretofore left in ballast for Baltimore now find it more profitable to load here.

Large quantities of wheat are now being received at the Port Richmond elevator, it having been shipped to Philadelphia over the Reading tracks. It is stated that the amount now in the elevator is 500,000 bushels, while its

storage capacity is 1,250,000 bushels. The indications are that the quantity of grain stored there will be largely increased, as the Baltimore & Ohio Railroad Company is preparing to make large shipments of wheat to this city. Sixteen steamers have been chartered to carry grain, and it is stated that they will commence receiving cargoes in a few days. This business has hitherto been almost completely monopolized by the Pennsylvania Railroad Company at this port, but hereafter the elevator at Port Richmond will take an important part in grain shipments from this port. The Reading Railroad Company is understood to have made an arrangement for a regular line of steamers at this port in connection with the bonded warehouses it has built at Port Richmond. This will be completed in a day or two, and will be the largest structure of its kind in the city. The terminals of the company at Port Richmond were recently visited by European capitalists, and soon afterward the agreement was completed for a line of steamers. The bonded warehouse of the Baltimore & Ohio Railroad Company, covering Pier 63 South Delaware avenue, is nearly completed, and it is thought that one object of President Garrett's mission to Europe is to secure a line of steamers to touch at this warehouse. Prominent shipping men say that these improvements indicate an increasing importance for Philadelphia as a seaport and a return to the activity which it at one time had.

The brokers of the Chicago Produce Exchange have recently advanced their rates of commission from one-eighth of one per cent. to \$2 per 1,000 bushels. W. B. Duprey, a grain broker and a member of the Commercial Exchange of this city, speaking of the change, says: "The new Chicago rate of commission is too high, and our customers in this city won't stand it. Orders will be diverted to New York, where a low rate still prevails. During the last three months our firm placed orders in Chicago for Philadelphia people amounting to 800,000 bushels of wheat, and under the new management I don't expect we shall place orders there for more than 1,000 bushels during the next three months."

The annual convention of the Pennsylvania millers was held at Williamsport, Sept. 1, with a good attendance, including representatives from New Jersey. A resolution, indorsing the Inter-State Commerce Bill, was heartily approved. The present officers were re-elected.

It is not the quantity of American wheat, and the price at which it can be thrown upon foreign markets in competition with that of other countries that is our advantage, but the quality also causes a preference for our superior staple. Great Britain again has a short grain crop, and its wheat this year is not up to the usual standard of excellence. The dealers in English markets know they have large purchases to make from abroad to supply the home deficiency, but hesitate to buy, hoping that later in the season the pressure to sell from countries having a surplus may bring prices down to a lower level than they still occupy. Liverpool tries to persuade itself that American wheat is not the chief factor for regulating prices in the English market. The *Mark Lane Express* of recent date remarks: "America has not the control of our market that she thinks she has; if she will not sell, India and Russia will; but the dread of an American wheat avalanche has paralyzed our trade ever since there have been such immense accumulations in the United States elevators or public stores." It is not our wheat that market dreads so much as the superior quality of American flour. The *Express* admits that "it is American flour which has done us most harm; all the best wheat is milled there and sent here as a manufactured product at a price with which we cannot compete, and which is rapidly undermining and destroying our local milling industry. If this is allowed to go on 'the Key of Mark Lane' will ultimately find its way to Minneapolis."

It may gratify the pride of patriotic Americans to know that the United States produces three-quarters of the corn crop of the world. The production last year was 1,665,441,000 bushels. Every state and territory in the Union produces more or less corn, but the seven principal corn states are Ohio, Indiana, Illinois, Iowa, Missouri, Kansas and Nebraska. The area devoted to corn shows a constant tendency to enlargement, having doubled in the last fifteen years, and it is now increasing at the rate of 2,000,000 to 3,000,000 acres annually. The table given below shows the estimated annual production for nineteen years, the amount exported and the amount retained for home consumption. The exports and the amount retained for home consumption are for the year ending June 30, and standing opposite the production for the preceding year—thus the corn crop of the year 1868 is on a line with the ex-

ports, and the amount retained for the year ending June 30, 1869, and so on:

	Production Bushels.	Total Exports Bushels.	Retained for Home Consumption Bushels.
1868.....	768,320,000	8,288,685	760,031,300
1869.....	906,527,000	2,140,487	904,386,500
1870.....	874,320,000	10,673,553	963,646,500
1871.....	1,094,255,000	35,727,010	1,058,528,000
1872.....	991,898,000	40,154,374	951,743,600
1873.....	1,092,719,000	55,985,834	1,036,733,200
1874.....	932,274,000	30,025,036	902,249,000
1875.....	850,148,500	50,910,532	799,238,000
1876.....	1,321,069,000	72,652,611	1,248,416,400
1877.....	1,283,827,000	87,192,110	1,196,634,900
1878.....	1,342,558,000	87,884,892	1,254,673,100
1879.....	1,388,218,800	99,572,329	1,288,646,400
1880.....	1,547,901,800	93,648,147	1,454,253,600
1881.....	1,717,434,500	44,340,683	1,673,093,800
1882.....	1,194,916,000	41,655,653	1,153,260,300
1883.....	1,617,025,100	30,912,713	1,586,112,400
1884.....	1,551,066,800	52,876,456	1,498,190,400
1885.....	1,936,000,000	64,829,617	1,971,170,400
1886.....	1,665,441,000	41,368,580	1,624,072,400

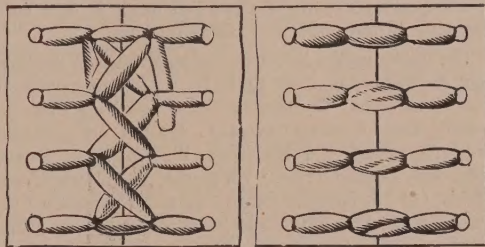
The noticeable fact here is the very small amount of the crop exported. It has never amounted to 6½ per cent. of the whole product, and for the last twenty years has averaged less than 4 per cent. In 1859 the exports of corn and corn-meal averaged little over 1 per cent. During the years when the harvests of Western Europe were poor, from 1869 to 1879, they averaged much heavier than usual, the increase being partly accounted for by the fact that the export price dropped from 93 cents a bushel in 1869 to 54 cents in 1879. Careful estimates made by the government show that not one sixth of the corn crop of the United States goes beyond country lines.

The market for grain freights continues very dull, and rates are to a great extent nominal. We quote at 2s@2s. 3d. for steamers for prompt loading for Cork for orders and direct Continent. There is no room offering in regular line ocean steamers.

J. C. D.

A BELT LACE.

Place the ends of the belt together, punch holes as for lacing in the usual way; then punch another row of holes



directly behind them, from one to one and a half inches away, and not as large as the ones nearest to the end. Cut a lacing eight times as long as the belt is wide, or the lace may be spliced as soon as one is used up. Commence lacing from the inside of the belt; put the lace through the holes nearest the end and in opposite ends of the belt, beginning at one edge, and draw the lace through, until the ends of the belt are drawn together and the lace is of equal length on the outside of the belt. Pass the ends across, put them down in the contrary way from what they were before, and bring them up through the same holes that you put them through first; then you have the laces on the outside of the belt. Put the ends of each lace down through the holes directly behind them, but do not draw them down snug until after you put it up through the same hole as before from that side, and draw it all tight. Now we have one set of holes finished, and the lace is on the outside of the belt. Cross the ends and pass down the first row of holes, and repeat as at first, and the lacing will be exactly similar, with the exception that there will be but two thicknesses of lacing in the place of three, as at the first; for it is most essential to have the edges of the belt laced firmly, lest your belt should run crooked over the pulleys.

The following touching verse comes from the sunny land of Texas:

The chinch bug eats the farmer's grain,
The bee moth spoils his honey,
The bed bug fills him full of pain,
The humbug scoops his money.

Nearly 3,000,000 bushels of flaxseed is annually grown in the state of Iowa, and the oil cake is largely exported. An Iowa paper says: "If it pays English feeders to have oil cake shipped from Iowa to England to feed their stock, perhaps we do not fully appreciate its value as a food."

CORN SHELLERS.

BY C. W. MARSH IN "FARM IMPLEMENT NEWS."

[Continued from last month.]

The venerable Augustus Adams of the Sandwich Manufacturing Company, the recognized leader in the development of corn shellers, now in his eighty-second year, in answer to our queries, writes as follows: "The first sheller that I ever saw was one that 'Father Brewster' had when he came to Elgin, Ill., which he brought from the East, but where made I do not know. It was like one of our one-hole machines, except that it delivered the shelled corn and cobs all together. Gregory and myself at Elgin made some one-hole shellers, taking Brewster's for pattern, which were probably the first shellers made in the state. The first separating sheller I ever saw was the Burrall Iron Sheller, about 1843 or 1844, which discharged the corn at the bottom, and the cobs at the end. This was built at Seneca Falls, N. Y. The first two-hole sheller that I know of was made by Allen Wayne, who furnished his own patterns and had his castings made by B. W. Raymond, when the latter was in company with me at Elgin. Wayne failed, owing Raymond for castings, etc. Raymond took his patterns and stock and turned them over to us at Elgin, and we worked up the unfinished stock, which was the commencement of our making two-hole shellers. The first power sheller I ever saw was, I think, in 1843 or 1844 at Bloomington, Ill., and was what was known as the 'Cannon Sheller.' It was a cast-iron case about seven feet long and perhaps a foot in diameter—receiving the corn at one end and discharging the cobs at the other, much like the 'Ottawa Sheller,' only I think there was no bar to shell against, but I do not recollect its internal arrangement well enough to describe it. I think it was made in Pennsylvania. The second was a cylinder sheller, made at Peoria; I do not recollect the maker's name. The next (about 1858) was the 'Magnolia,' built at Magnolia, Putnam Co., Ill., which shelled with ribs on a cast cylinder, and it had, I think, a concave with round rods to let the corn through. I do not now recollect particularly, but there was no 'Cannon' about that. I guess the Adams ran it out a long time ago. And the next cylinder sheller that came considerably into use, more especially in warehouses, was the 'Richards,' made in Chicago. This had a revolving screen surrounding the cylinder to separate the corn from the cobs." Mr. Adams mentions others, but as they are more modern, we reserve notice of them till we describe shellers that are now on the market.

Mr. Galt says that he recollects "using a sheller at an early day, made by driving broken nails into a cylinder, placing the cylinder in a box, and as the cylinder was turned it shelled the corn from the cob." The improvement of such crude devices leads to the perfected implement of trade. The *Annual Register of Rural Affairs* for 1857, says of Smith's patent "Cannon Sheller," which I am informed was manufactured at Kinderhook, N. Y., that it was considered the best then in use for shelling corn on a large scale, and described it as follows: "It is a horizontal-toothed cylinder, six feet long and fourteen inches in diameter. It can be operated by water, steam or horse power, and hence would be very valuable in the Western States, where Indian corn is grown in great quantities. * * * The ears of corn are confined in the operation to a part of the upper or rising side of this cylinder, by means of a cast-iron concave or case extending the whole length of the machine; and the corn being shoveled in at one end is driven through, and the cobs discharged at the other, while the corn falls below, being admitted by the small space on either side of the cylinder. The operation is governed by elevating or depressing the discharging end, which causes the machine to discharge the cobs fast or slow, and of course operating more or less upon them—thus securing to the operator the means of finishing his work. It is capable of shelling 200 bushels of ears per hour with a two-horse power; price \$45 and \$50." The *Register* also speaks of the "Clinton"—one and two-hole shellers of the disc or picker-wheel type, as in general use; price \$10 to \$12. This sheller was built by the Clinton Agricultural Works, of Clintonville, Conn., and had a very extensive sale, in fact quantities of them were shipped abroad.

Mr. Adams moved from Elgin to Sandwich, Ill., in 1857, where A. Adams & Sons continue this business and put out several styles of shellers of the picker-wheel type; and before the war they had become widely known to the corn buyers on the roads running through the "corn belt" on account of their two and four-hole horse power machines. These were, as to shelling devices,



simply enlargements of their hand-shellers—consisting of a large picker-faced disc or wheel, with a smaller wheel having beveled and ribbed face (stripping or feed wheel) faced to it, and a rag iron, for each shelling set, and arranged in series of two or four for two or four-hole shellers. The four-hole machine was furnished with fan and elevator, and was turned by two-horse power. It was fed from table on a level with the throats, a man on each side feeding two. Two expert men could put through about 800 bushels per day, a very satisfactory result—considering the inexpensive character of the machinery, the light force and power for operating it, and the neatness and cleanness of the work done, as compared with the large cylinder shellers then in use.

Some two or three years before the war I bought a two-hole one-horse power sheller from Dillman & Sons, Plainfield, Ill. This was of the picker-wheel type, also with cob carrier and little fan. It worked well and shelled quite rapidly. I am informed that the elder Dillman died in 1862 or 1863, that his sons worked on for some years and then moved to Joliet, where the business was afterward merged in the Joliet Manufacturing Co. A sheller on the same general plan was made at Morris, Ill., at the time above mentioned, known as the "McQuiston," but it did not largely enter the trade. The old firm of Galt & Tracey, which was afterward merged in the Keystone Manufacturing Co., Sterling, Ill., made hand shellers at an early period in the history of Western manufacture, and afterward horse powers—the business having been greatly enlarged and continued down to the present.

Wm. Gillman, of Ottawa, Ill., early in the "sixties," began the manufacture of a cylinder sheller for portable service among the farmers. This was a very good machine, and had considerable sale. It was the beginning of the business that for many years past has gone under the name of King & Hamilton. There was also in use before the war a cylinder sheller made at La Fayette, Ind. This was a large machine adaptable to warehouses, and I understand was substantially the same as the one built by Mr. Richards, of Chicago, and known widely as the "Richards Sheller." Many others in the West began manufacture later, whose work I will notice in the next paper.

In the East—besides the "Clinton," which received its name from David Clinton, who invented the bevel or feed wheel and its combination with the picker wheel, and the "Burrall," invented by T. J. Burrall, who about 1850 fixed his shelling device in a cast-iron case, with separator forming a part of the case—there were A. Blaker & Co., Newtown, Pa.; the Pennock Manufacturing Company, Kennett Square, Pa., and Ruggles, Nourse & Mason, Worcester, Mass., all manufacturing shellers along about 1850 of the picker-wheel type. The last-named concern built what was known as the "Armsby." This sheller was an improvement upon the Clinton in the direction of cheapness; the feed wheel, pinion, shaft and balance wheel were cast in one piece, the picker wheel and its shaft in same way; so the labor of fitting up the iron work was reduced to turning the journals. It was a good machine and had a large sale, but having a small balance wheel it was not so well adapted for shelling large ears as small, hence it was not in demand in the West to any great extent. Some were made double and some with separators.

I regret my inability to obtain more information concerning shellers manufactured at an early period in the Eastern States, but I can only give what I can get, or may know personally, about any of the machines or classes of implements which I have endeavored to describe. It is interesting to me—this work of tracing and following the development of implements from the first crude beginnings onward through the ages past, into the perfected machines of the present. It proves that this development was not a regular process, but that primitive man, wherever he began to till the earth, provided himself with substantially the same rude implements, as instinctively as all would seek something tight and hollow for holding water; that the ancient civilized peoples of history had made considerable progress in these practical arts, bringing their machines up to the same general standard; that little or no advance had been made since the opening of the Christian era until about the beginning of this century; that the British took the first steps in modern progress; and that during the last half century in the United States development has been so rapid that perfection in all lines has been substantially attained. These propositions provide food for various reflections and speculations.

[TO BE CONTINUED.]

The Roller Chain Belting Co., of Columbus, O., report their chain business booming, running full time with a good outlook for future orders.

Webster & Comstock Mfg. Co. of this city will furnish 11,000 20x6 heavy cross tin buckets for the huge elevator that Armour is building on Goose Island in this city.

The Chicago Feed Mill Co., of Chicago, Ill., has been incorporated with a capital stock of \$10,000. Incorporators, H. C. Staver, W. H. Swarthout and T. H. McAdow.

Fred Reese, of Paris, Ill., has patented a broom-corn seed separator that is meeting with great success in the broom-corn regions of the West. He has also applied for a patent on a broom cutter that has many good points to recommend it.

D. B. and J. W. Peters, of Galloway, Ohio, have patented a grain door for railroad cars which is so constructed that it may be removed, allowing the grain to flow out in about one minute's time, an operation that usually occupies one-half an hour and an endless amount of cutting and breaking of lumber.

The Link-Belt Machinery Company, of Chicago, Ill., is just completing one of the largest plants for handling coal in the United States. The machinery is for the Pennsylvania Coal Company at Milwaukee, Wis. By this arrangement all the coal is unloaded, screened, assorted and reloaded automatically by a system of link-belt elevators and conveyors.

Oliver Caldwell, of Chicago, Ill., has invented a method of making continuous and seamless spiral conveyor flights or elevators which consists in forming a flight from a strip of metal thicker at its outer edge than at its inner edge by passing the same between rolls adapted and arranged to act upon such a strip of metal and bring it to a substantially uniform thickness and spiral form.

The following is a list of the boiler sales of the Babcock & Wilcox Co., New York, N. Y., for the months of July and August: The Electric Club, New York City, 75-pound; Eagle Knitting Company, Elkhart, Ind., (second order,) 50-pound; Old Kentucky Woolen Mills, Louisville, Ky., (second order,) 104-pound; A Hayward, San Mateo, Cal., 51-pound; Lehigh Coal and Navigation Co., Philadelphia, Pa., (third order,) 208-pound; Sibley Mills, Baltimore, Md., (second order,) 125-pound; Pacific Power Company, San Francisco, Cal., 208-pound; New York Steam Co., New York City, (fourteenth order,) 400-pound; New York Steam Co., New York City, (fifteenth order,) 250-pound; Edison Electric Manufacturing Co., of New York City, (thirty-fifth order,) for three new stations, 8,700-pound; Chicago, Burlington & Quincy R. R. Co., Chicago, (second order,) 136-pound; St. Louis Refrigerator and Wooden Cutter Co., (second order,) 240-pound; Chickies Iron Co., Chickies, Pa., 240-pound; Randleman Manufacturing Co., Randleman, N. C., 51-pound; D. R. Campbell, Sangerville, Me., 122-pound; Inter-State Consolidated Rapid Transit Railway Co., Kansas City, Mo., 400-pound; People's Cable Railway, Kansas City, Mo., 600-pound; Troy Iron & Steel Co., Troy, N. Y., (second order,) 460-pound; Market Street Cable Railway Co., San Francisco, Cal., (second order,) 500-pound; T. A. Edison, for his new laboratory, Orange, N. Y., 219-pound; New York Steam Company, New York City, (sixteenth order,) 250-pound; making a total of 13,387 pounds.

DAKOTA WHEAT.

Trouble is apprehended in Dakota on account of the condition of the wheat brought to the elevators. In addition to refuse matter, seeds, etc., found in it, much of it was harvested in wet weather, and instead of allowing it to dry out properly in the shock, the farmers stacked it while damp. It was then threshed too soon, and as a consequence is now getting pretty well heated and will come out musty and mouldy. The warehousemen refuse to receive it in this condition except at very low prices. This will force a large quantity of grain into store in country houses for account of the owner, and the result will be that the houses will be filled with off-grade wheat and a blockade will follow. Some elevators have closed their houses, as they cannot provide special bins for the

damaged wheat, and there is a great risk in handling it at all. One company operating on the Manitoba line, reports that out of 50,000 bushels a day delivered by farmers, they are purchasing only about 2,000 bushels, the remainder going into store on the farmer's account. The farmers are advised to hold back their wheat as long as possible and avoid rushing it to the market. At best they cannot hope to receive anything like the market price.

INSPECTION AND DOCKAGE OF GRAIN.

At the recent meeting of the Minnesota Railroad and Warehouse Commissioners, the grades of grain now in force were re-established for the coming year. The grades adopted by the commission will also be known as the Dakota grades, and as the Dakota law requires that grades in the territory shall not differ from those of Minnesota, samples of all grades of all grains are to be prepared for Dakota warehouses and elevators. The grades of wheat for the coming year in both Dakota and Minnesota will be as follows:

No. 1 Hard Spring Wheat—No. 1 hard spring wheat must be sound, bright and well cleaned, and must be composed mostly of hard Scotch fife and weigh not less than fifty-eight pounds to the measured bushel.

No. 1 Northern Spring Wheat—No. 1 Northern spring wheat must be sound and well cleaned, and must be composed of the hard and soft varieties of spring wheat. Note—It is to be understood that the minimum test weight of this grade shall not be less than fifty-seven pounds to the measured bushel, and must contain not less than about 50 per cent. of the hard varieties of spring wheat.

No. 2 Northern Spring Wheat—No. 2 Northern spring wheat must be sound, reasonably clean, and of good milling quality. Note—This grade to include all wheat not suitable for the higher grades, and to weigh not less than fifty-six pounds to the measured bushel.

No. 3 Spring Wheat—No. 3 spring wheat shall comprise all inferior, shrunken or dirty spring wheat, weighing not less than fifty-four pounds to the measured bushel.

Rejected Spring Wheat—Rejected spring wheat shall include all spring wheat that is grown, badly bleached, or for any cause unfit for No. 3 wheat. Note—Wheat containing any admixture of "rice" or "goose" wheat will in no case be graded higher than rejected.

No Grade—All wheat that is in a heating condition, musty, or too damp to be safe for warehousing, or has any considerable admixture of foreign grain or seeds, or is badly "bin burnt," whatever grade it might otherwise be, shall be pronounced "No grade," with inspector's notations as to quality and conditions.

The commission also took under consideration a set of rules governing the weighing, dockage, inspection and handling of grain, reported by Chief Inspector James. A number of changes were made, chief of which was in the rule governing the dockage of grain. The rule as revised reads as follows:

Rule 49—In inspecting wheat that has not been properly cleaned, the track inspector shall determine, and shall state upon his inspection ticket the number of pounds per bushel or fraction thereof that in his judgment will be a just and proper allowance for cleaning the wheat, and the grade fixed upon it by said inspector if cleaned in a public warehouse under state supervision, provided that if said wheat contains such an excess of dirt or foul seed that the inspector cannot correctly judge the amount thereof, he shall determine by actual test with suitable appliances the average amount of such dirt and foul seed per bushel that it will be necessary to deduct for properly cleaning such wheat to the grade fixed upon it by the inspector, and when such deduction has been determined, it shall be plainly stated upon the inspection ticket. After the waste in any lot of grain has been determined each public warehouseman shall be held responsible to clean such grain under state supervision, and make it fit and suitable for the grade fixed upon it by the track inspector.

Nothing in the within rule shall deprive any interested party of the privilege of ordering the grain into a public warehouse and causing the actual waste to be ascertained.

In no case shall the cleaning machinery be run in a different manner than while in ordinary use, either by speed, feed or draft, and in case parties so desire, the actual dirt taken out of said grain shall be saved and weighed on a platform scale to be kept by each public elevator or warehouse for that purpose, allowing a fair per cent. for waste passing through the blow spout.

The owner or agent of any lot of grain so ordered cleaned shall have full and free access to such grain during the process of cleaning. The grain shall be weighed before and after such cleaning by a state weighman. The result of such cleaning shall be final and binding upon all parties. The charge for cleaning wheat in a public elevator or warehouse shall not exceed one-half cent per bushel.

Sunday school teacher to little son of a Wall street broker—"Now why did the bears come out of the woods and eat up the bad little boys who made fun of Elisha?" Sharp boy—"Cause they'd stood in with the bulls."

INCIDENTALS.

The corn crop of Mississippi is estimated at 30,000,000 bushels.

Prince Bismarck has interests in three large distilleries in Germany.

It is said that the California wheat deal has been seriously felt in Liverpool.

Minneapolis is making about 23,000 barrels of flour daily and so using up just about her wheat receipts.

The Canadian Pacific has reduced wheat rates between Winnipeg and Port Arthur to four cents per hundred.

It is reported that Kansas will probably need the entire wheat product of the state this year for home consumption.

It is said that during its period of growth Indian corn draws from the soil thirty-six times its own weight of water.

The crop calculator of the Bismarck *Tribune* has figured out that Dakota's wheat yield will reach 70,000,000 bushels this year.

The wheat crop harvested on the Glenn grant, near Jacinto, Cal., will amount to over 200,000 sacks, most of it sold and shipped at once.

Russian wheat planted in the Northwestern British provinces shows that it matures before the frost, and will be of great value to that region.

The stock of wheat in all the Call Board warehouses at San Francisco and Port Costa, Cal., on Sept. 1 was 232,000 tons, an increase of 100,000 tons during August.

To correct a misapprehension that exists in certain quarters, the statement is made that there will be no change made this fall in the rules governing barley inspection at Chicago.

Experiments have shown that soaking seed-oats for about two days in a solution of sulphate of copper—four ounces in a gallon of water—prevented the appearance of smut in the crop. It is at least worth a trial.

The area in flaxseed in Kansas this year was 132,580 acres and the yield 90 per cent. of an average for the past five years. The area in broom corn is 71,575 acres, and the condition 76 per cent. of an average for the past five years.

Hereafter separate bills of lading will be issued for each carload of grain consigned to Buffalo. Grain will not be delivered in that city in the future save on presentation of original bills of lading, and not on bank orders as in the past.

Reports from Manitoba agree that the average estimated yield of twenty-five bushels to the acre is being exceeded. In some places the yield was thirty-six bushels by measure, which would probably make thirty-eight bushels per acre by weight.

In 1879 there were only forty cotton-seed oil mills in the South. In 1886 there were 146, and the capital employed in them had increased from \$3,504,500 to \$10,792,450. Of the 3,000,000 tons of seed grown annually only 400,000 tons are yet made into oil.

A meeting of the grain examiners of the Board of Trade of Toronto, Ont., is to be held Sept. 15 for the purpose of choosing samples of grain of the various grades to be the standards by which the inspectors for 1887-8 throughout Canada are to be guided.

The report of the trustee of E. L. Harper & Co. has been filed in the Probate Court of Cincinnati. The total appraised value of assets is \$103,202. The total direct liabilities are \$1,462,744; indirect liabilities as indorsers \$1,692,073. The winding would give creditors about 4 per cent. on their claims.

An Iowa correspondent of the Chicago *Tribune* calls the attention of the General Freight Agents of Western roads to the necessity for more equitably adjusting the freight tariff on flaxseed from Western points to Chicago, to bring it more nearly on a basis with wheat and other grain. He thinks the rate at present is entirely too high, and says that when the farmer could get \$1.25 to \$1.35 per bushel for his crop, he could afford to pay the old rate which was the same as for wheat; but now when flaxseed

is selling at from 95 cents to \$1 per bushel, and the average yield is only six bushels per acre, no inducement is offered the farmer to cultivate it. From Western Iowa and Minnesota points the rate on wheat is 24 and 25 cents per hundred pounds, while the rate on flaxseed is 30 to 31. He thinks this difference should be modified.

It is thought by some that wheat-growing will have to be abandoned in Iowa except in the extreme northern portion; as the wheat brings the chinch-bug, which, after the wheat is cut, goes for the corn field. In this case, the farmer would have to fall back on stock-raising as his principal source of income.

The following is among the recent instructions issued to agents by the freight department of the Milwaukee & St. Paul: On mixed car loads of grain and seed from one consignor to one consignee, the car load rate on each kind of grain and seed will apply, provided that all but one of the different kinds of grain and seed are sacked.

About 28.15 per cent. of our total probable wheat surplus available for export has been sent abroad in about two months of the new crop year. This is at the rate of 210,000,000 bushels per annum, while the calculated available surplus for export wheat and flour, July 1, 1887, to July 1, 1888, is equal to about 115,000,000 bushels.

A most remarkable yield of oats has been threshed by Martin Brownfield, near Tolono, Ill. On eight acres of ground he had 672 bushels, machine measure, being 84 bushels per acre. The oats were extremely fine and heavy, weighing out 110 bushels per acre. The ground was carefully prepared and seeded at the rate of three bushels per acre.

A Duluth man says that one reason why so much wheat comes in bad condition to the market is because farmers have their wheat threshed by owners of threshing machines who charge by the bushel. They have been known to tack bags over the screen of the machines, and thereby make more out of the farmer by charging him for wheat filled with chaff.

More than 1,000,000 bushels of the California wheat now in Liverpool was sold Sept. 1 at about 6s. per cental, most of it being purchased by millers. One parcel, however, was purchased by an exporter from Chicago, who made out of it a profit of 2s. per cental, having sold it short some time ago at 8s. And so they reap the benefits of the great deal.

The statement of the visible supply of grain afloat and ashore on Sept. 10, as issued by the Produce Exchange, was: Wheat, 31,210,890 bushels—increased, 523,761 bushels; corn, 7,106,089 bushels—increased, 269,239 bushels; oats, 4,378,400 bushels—decreased, 346,767 bushels; rye, 281,864 bushels—decreased, 27,801 bushels; barley, 514,054 bushels—increased, 222,112 bushels.

An item in the New Orleans *Picayune* states that Illinois farmers propose to transport thousands of hogs from the drouth-stricken regions of this state to Northern Mississippi, where corn is abundant. This is certainly reversing the usual order of things, as until but a few years ago Mississippi depended on Illinois and other Western states almost entirely for her corn.

The statement of the Kansas Board of Agriculture makes the wheat crop 7,470,350 bushels. This, with the old wheat on hand, will be enough for bread and seed. The corn crop is 82,557,258 bushels from 6,520,428 acres, a yield of 49 per cent. of an average for the past five years, and a decrease from last year of 44,143,000 bushels. There were 12,000,000 bushels of corn carried over.

Receipts of grain at Buffalo for August aggregated 13,603,000 bushels, and for the season to August 31, 60,687,000 bushels, as compared with 54,689,000 bushels in a like portion of 1886. The movement of grain via Welland Canal, this season, is said by the *Commercial Advertiser* to have been very light. Shipments of grain received by lake to the East by rail are unusually large, the total being 17,748,000 bushels, to 12,944,000, 7,121,000, and 5,564,000 respectively, in the preceding three years. The canal shipments aggregate 28,642,000 bushels, a gain over last year of 2,000,000 bushels.

The *Citizen*, of Dalton, Ga., is responsible for the following: "It is said the corn is so rank, dark and green on the Conasauga bottoms that the light from the fire-flies can be seen flickering through its somber shade, even when the sun is high in the heavens. An old farmer tells a good one about a fellow who lost his way in one of these vast, dark forests of corn, and was utterly unable to extricate himself. An exploring party with lanterns went in search of him. When at last 'the lost was found,' he

was discovered in the top of a tall cornstalk, astraddle of an ear of corn, where he had been watching for the last twenty-four hours for the sun to rise."

An important suit was begun Aug. 31 in the United States Circuit Court at Cincinnati, Ohio, against Smith, Vail & Co., of Dayton, Ohio, and the Southern Cotton-Seed Oil Company and its promoters, by Geo. W. Hatfield, of Arkansas, to recover certain patents on oil press boxes of which Mr. Hatfield is the inventor, and also royalties for the manufacture of a large number of these boxes sold by Smith, Vail & Co.

Orders have been received at Duluth from the Northwestern Underwriters' Association advancing the insurance rate on elevators fifty cents a hundred. The action applies to all elevators at Minneapolis, Fargo, Grand Forks, and all other points in the Northwest, as well as to Duluth. The heavy losses incurred by insurance companies on grain and elevators during the past year is the cause of the increased rate.

Since the wheat has been threshed in the great wheat counties in the Red River Valley, Dakota, it has been found to fall far below the expected yield, and, indeed, is the lowest on record. On the Dalrymple, Cass and other vast wheat farms, it will not average ten bushels per acre, and the grain is unusually dirty, which will still further lower the amount. The shortage, with low prices, will make times rather hard in that section of the country.

Some one in Iowa has introduced to notice a new fuel, which is destined to take the place of coal in the prairie countries. The fuel is made by grinding cornstalks and coarse prairie grass together, moistening them and then pressing the pulp into blocks about twelve inches long and four inches thick. These blocks are then dried. It is claimed that one block will give an hour's steady heat, and that the fuel can be produced for three dollars per ton.

Another from Nebraska: A farmer a few miles from Columbus went out one day last week to get an ear of green corn for dinner. Not having a ladder handy, he attempted to climb up a cornstalk to get it. When he got up about fifteen or twenty feet and took hold of the ear, it suddenly broke loose and the farmer fell and broke his arm. The ear came down and only missed his head a few inches. Had it hit him he would undoubtedly have been killed.

"I never saw a greater rascal in my life than old Smith is," remarked a farmer. "What makes you think so?" asked a friend. "Why, he said that the first sack of oats that I sold him was too light, so I put a large iron wedge in the next sack of oats, just to please him, you know, and—" "Did he kick against the wedge?" "No, he would have split his foot if he had kicked against the wedge. He did worse." "Did worse?" "Yes; the blamed old thief kept the wedge."

A good old church deacon in Michigan who was tempted into dabbling a bit in wheat picked up the paper one morning and read: "A more hellish feeling developed in our market yesterday." The editor had written it "bullish," but the good old deacon laid the paper right down and went to his telephone and said to his broker: "Sell me out at once for whatever you can get. I've been expecting something like this for a long time, and I don't propose to have old Satan walk in on me."

It is claimed that the farmers are holding onto wheat in many sections of the West on account of the light crop of corn, but at the same time the interior receipts of wheat have rather increased over the previous week. A writer of good judgment and a good deal of experience makes the following estimates of the wheat crop in probable receipts at Minneapolis, Sept. 1, 1887, to Sept. 1, 1888, 15 per cent. less; Duluth, 15 per cent.; Milwaukee, 20 per cent. less than last year, and at Chicago, July 1 to July 1, 1887-88, 20 per cent. less than last year.

The destruction of the grain elevators at St. Anthony, near Minneapolis, recently, with a loss of over \$1,000,000, again calls attention to the very hazardous nature of these risks. There are a number of huge elevators in the vicinity of New York, which it would be advisable for the inspectors to see to. Admitting that they are supplied with all the necessary appliances to fight fire, the question remains, what condition are these appliances in, and how often are they tested to see if they are in working order? We refer particularly to the hose, the couplings on the plugs, and the fire pumps. A little investigation will show that the hint herein given is of value.—*Insurance World*.

ELEVATOR AND GRAIN NEWS

Clio, Mich., is prospecting for a grain elevator.

A new elevator has been completed at Persia, Iowa.

T. W. Haley will establish a brewery at Palatka, Fla. Stuber & Co., brewers, Syracuse, N. Y., have sold out.

Gladstone, Mich., aspires to the honor of being a grain port.

A new linseed oil mill has been started at Yankton, Dak.

A grain elevator is in course of erection at Downing, Iowa.

Seed wheat swindlers are working Isabella county, Mich.

Salina county, Kan., claims a corn crop of 600,000 bushels.

Graddy & Son will build a new grain elevator at Versailles, Ky.

R. E. Miller, grain dealer, Richmond, Va., has made an assignment.

A. H. Reed & Co. have sold their grain elevator at Glencoe, Minn.

Chas. Barrell has sold out his hay and grain business at Galveston, Tex.

The Eagle Mills Distillery Co. has been incorporated at Mt. Jackson, Ind.

Cincinnati parties contemplate the erection of a brewery at Roanoke, N. C.

A new grain elevator will be built immediately at Paynesville, Minn.

Geo. Spieler & Co., maltsters, St. Louis, Mo., have dissolved partnership.

Grove & Ross are closing out their grain and feed business at Mobile, Ala.

Ravenna, Neb., wants another grain elevator for the sake of competition.

The linseed oil mills of Leavenworth, Kan., are again to be put in operation.

Sheridan & Ryan, grain dealers, St. Louis, Mo., have dissolved partnership.

Leander D. Ally, Dexter, Mich., has sold out his grain business at that point.

W. H. Godair, grain and stock dealer, Gowrie, Iowa, has removed to Texas.

The Denton Mill & Elevator Co., Denton, Tex., are sinking an artesian well.

F. H. Ryan has retired from the grain firm of Sheridan & Ryan at St. Louis, Mo.

The new grain elevator at Dundee, Mich., will have a capacity of 7,000 bushels.

Enoch Hergott and Jacob Keintz will erect a three-story brewery at Stratford, Ont.

Escanaba, Mich., has two mammoth elevators in prospect, so says a local paper.

A. B. Taylor & Co., grain dealers, Minneapolis, Minn., have dissolved partnership.

Bacon & Co. are removing their corn cribs and bins from Colfax to Anchor, Ill.

There are 20,000 bushels of corn in crib at Colfax, Iowa, awaiting high prices.

Frank Kleiner is successor to Wilms & Kleiner, brewers, at Kingston, N. M.

R. F. Wiley has withdrawn from the grain firm of Warren & Co. at Peoria, Ill.

Snapp & Hall, grain dealers, Denver, Col., are succeeded by Snapp & Wheeler.

Stebbins & Flint, grain dealers, Spencer, Iowa, are succeeded by Bender Bros. & Co.

Bassett, Hunting & Co., grain dealers, McGregor, Iowa, are succeeded by Hunting & Co.

C. M. Jacques, of Loup City, Neb., is erecting an elevator of 50,000 bushels' capacity.

M. S. Smith is succeeded in the grain business at Glidden, Iowa, by Lyons & Mercenes.

G. W. Robinett has purchased the grain business of Gurney & Callen at Cameron, Mo.

Huntoon & Bro. are successors to D. H. Huntoon in the grain business at Earling, Ind.

Two new elevators are being built at Lidgerwood, Dak., making a total of five for that town.

The Austin Board of Trade, Austin, Tex., has been chartered with a capital of \$50,000.

The Senoia Fertilizer and Manufacturing Co., Senoia, Ga., will build a cotton seed oil mill.

C. F. Dwight, of Chicago, has been granted a building permit for a 500,000 bushel grain elevator.

The Omaha (Neb.) Milling and Elevator Company was incorporated Sept. 1 with a capital stock of \$100,000.

Incorporators, C. Crow, Aaron and E. S. Chadwick, Anthony Jackson and others.

H. P. Pares has been admitted to the brewing firm of Woodley & Nenmeyer at Brandon, Man.

Noe & Son have succeeded George Gregory in the coal and grain business at State Center, Iowa.

Wilson Burnside, grain dealer at Audubon and Ross, Iowa, is succeeded by Thomas S. Francis.

The Grantville Ginning and Manufacturing Co., Grantville, Ga., will erect a cotton seed oil mill.

Miller & Co. will establish a brewery with a yearly capacity of 10,000 barrels at Ashland, Wis.

A local paper says: Wheat is pouring into Salem, Oregon, at the rate of 8,000 bushels per day.

The Crescent City Flouring Mills Co., of New Orleans, La., will erect a 50,000-bushel grain elevator.

The new grain elevator at Aberdeen, Dak., when completed will have a capacity of 45,000 bushels.

W. H. Goodenough, dealer in grain, lumber, etc., at Gowrie, Iowa, has removed to Louisiana, Mo.

The Northwestern Brewing Co., of Chicago, has been licensed to incorporate. Capital stock \$350,000.

O. M. Sherwood, formerly of Hermosa, Dak., is at present employed in a grain elevator at Chicago.

Scott & Co., of Eagle Grove, Iowa, have recently changed their elevator from horse to steam power.

New wheat is bringing 57 and 58 cents at Clairmont, Dak., and a large amount of it grades No. 1 hard.

Keokuk, Iowa, is to have a new starch factory. It will be removed from New Haven, Conn., to that city.

Mr. Preston Woods, Colfax, Ill., has just completed a large grain elevator to be operated by steam power.

A company has been chartered to build a line of warehouses along the river front in Winnipeg, Manitoba.

Erskine & Co., grain dealers, Helena, Mont., have dissolved partnership, and are succeeded by D. J. Welch.

The representatives of a Milwaukee firm have recently been looking up a site for a brewery at Loup City, Neb.

The Planters' Cotton Seed and Crushing Association, Greenville, Miss., will double the capacity of their mill.

A new elevator is to be built at Kimball, Dak., this season, which will give that enterprising town three elevators.

A number of elevators will be erected at once along the line of the Manitoba Road in the vicinity of Watertown, Dak.

The grain buyers of Fowler, Cal., say there will be about 12,000 tons of wheat shipped from there this season.

Chas. Dwyer bought the elevator of the Farmers' Milling and Elevator Co., at St. Lawrence, Dak., at receiver's sale for \$10,448.

Thomas Wright & Co., grain dealers, Kansas City, Mo., have changed their firm name to the Thomas A. Wright Commission Company.

Hollingshead & Bull, dealers in grain and lumber at Milton, Iowa, have dissolved partnership. C. E. Bull will continue the business.

It is announced that W. R. Linn, a prominent Board of Trade man, and the Dwight Bros., of Chicago, will erect a 1,000,000-bushel elevator.

W. T. Radford, the "wheat king" of Kentucky, has purchased a handsome residence at Hopkinsville, that state, and will reside there.

S. R. Cross, grain buyer at the elevator at Norman, Iowa, has recently put in a pair of new scales, with a weighing capacity of four tons.

The Bismarck, Dak., elevator has been leased to the Mandan Roller Mills, of Mandan, that state, and Mr. Hood has been placed in charge.

The Alton Elevator Co., of Alton, Kan., has been incorporated. Capital stock \$3,500. Incorporators, M. Creppin, J. Quingley and others.

Wilbur Van Fleet has purchased the grain and feed business of Chas. Van Fleet at Unionville, N. Y. He will increase his storage capacity.

Two elevators with capacities for 18,000 and 25,000 bushels respectively, have been built at Carson City, Mich., within the last three months.

A bunch of White Welcome oats having thirty stalks from a single seed, was recently grown by Henry Rodman, on his farm near Williamston, Mich.

The Northern Pacific Elevator Company of St. Paul, has filed an amendment to its articles of incorporation, increasing its capital stock to \$650,000.

A Duluth grain firm is making preparations to build a grain elevator at Aberdeen, Dak. It is the intention of the firm to pay Duluth prices for wheat.

Linebarger & Darnall, of McLean, Ill., will put an addition to their elevator of 42 feet, which will give them a capacity of 25,000 bushels more of grain.

The Red River Valley Elevator Company has filed an amendment to its articles of incorporation, increasing its capital stock from \$150,000 to \$200,000.

A stalk of corn recently left at the office of the *Iowa State Register*, measured over fourteen feet in height. It was grown on a farm near Clarkson, that state.

T. M. C. Logan is building a large grain elevator at Blencoe, Iowa, and has ordered his outfit of machinery, consisting of a large engine and boiler, corn-sheller and

cleaner, wheat, oats and barley cleaner, shafting, pulleys, boxes, collars, etc., of Jarrett's Engine and Machine Works, Des Moines, Iowa.

The Philadelphia (Pa.) Grain Elevator Company will erect two warehouses at Port Richmond, one 550x100 feet and the other 300x200 feet, for storage purposes.

Bates & Hall, grain and wool dealers, and W. C. Page, banker and dealer in grain, etc., at Ionia, Mich., have consolidated under the firm name of Page, Bates & Co.

L. A. Gilbert has again taken his post as treasurer and general manager of the Minnesota & Dakota Elevator Company, whose principal office is at Minneapolis, Minn.

Mr. J. M. Moon, of Bloomington, Ill., has obtained possession of a 100,000-bushel grain elevator at Mansfield, the same state, which he is operating with good success.

Messrs. Bechtel & Wiley, hardware dealers and grain buyers, Colfax, Ill., are erecting a handsome, brick business building, 24x60 feet, two stories high, with basement.

The Milwaukee Road has instructed its agent at Aberdeen, Dak., to bill wheat in carloads to Chicago at 25 cents a hundred, the same to be milled in transit at Minneapolis.

The farmers in the vicinity of Richland, Kalamazoo Co., Mich., are buying Western corn for next winter's use and cutting for fodder the drouth-stricken stalks in their fields.

It is understood that the owners of Elevator A, Minneapolis, Minn., will buy wheat this season and fill up their house, as last year only about 50 per cent. of the capacity was in use.

J. Haver & Co., of Tingley, Iowa, have been furnished with iron elevator boots, shafting, etc., for their elevator, by Geo. L. Jarrett, mill furnisher, Des Moines, Iowa.

Says the *Journal of Lincoln*, Ill.: "J. D. Gillett has on his farm and at some of the stations 200,000 bushels of corn, some of it two years old. It is said that he will not sell under 50 cents."

The Minneapolis Grain Dealers' Association has been incorporated at Minneapolis, Minn., to buy, sell and deal in grain, etc. Capital stock \$500,000. Incorporators, W. D. Washburn, John Martin and others.

The prediction has gone forth that corn will not bring over 35 cents per bushel this year in Kansas. There is a large amount of old corn in the state which will prevent the markets reaching a very high figure.

C. W. Carroll has removed from Henry, Ill., to Clarinda, Iowa, where he has charge of several grain elevators. Mr. Carroll was a prominent citizen of Henry, having held the position of alderman and mayor.

The Rossville Distilling Company, of Greendale (Lawrenceburg P. O.), Dearborn county, Ind., has been incorporated. Capital stock, \$100,000. Directors are N. J. and D. S. Walsh, John K. Thompson and others.

Mr. N. Brass, of the elevator firm of Graling & Brass, Spring Valley, Minn., it is said will erect elevators at Woonsocket and Forestburg, to be operated by his son, William Brass, and his partner's son, Milo Graling.

Piersol & Van Kirk, Rockwell, Iowa, are refitting their elevator, and have purchased their belting, elevator buckets, shafting, pulleys, boxes, collars, flanges, etc., of Jarrett's Engine and Machine Works, Des Moines, Iowa.

The Richmond Linseed Oil Company, of Richmond, Ind., filed articles of incorporation Sept. 2. Its capital stock is \$22,500, and the directors are Wm. R. Evans, of Indianapolis, and Clements Ferguson and Jas. F. Reeves, of Richmond.

The Charleston Elevator and Warehouse Company of Charleston, Ill., has been incorporated for the storage of grain, mill-feed and other merchandise. Capital stock \$5,000. Incorporators, Edward S. Orr, Robert S. Hodgen and Lewis Monroe.

Prinx & Alrich, Peoria, Ill., will erect a new malt house to take the place of the one lately burned. The main building will be 70x100 feet and six stories high; the elevator 25x25 feet and 65 feet high, and a double kiln 30x30 feet and 90 feet high.

C. J. Cogswell has retired from the firm of Mabey, Bouton & Cogswell, grain dealers at Lake City, Minn., and has formed a partnership with William Wilson, the name of the new firm being Wilson & Cogswell. They will handle grain also.

The Des Moines Linseed Oil Co., of Des Moines, Iowa, have lately added a large amount of shafting, pulleys, boxing, collars, gears, belting, etc., to their mills. The supplies were furnished by Jarrett's Engine and Machine Works of that city.

Three of the grain elevators at Indianapolis, Ind., have been converted into storehouses, and very little is being done at the remaining two elevators of that city, so a local paper states. The Inter-State Commerce Bill is responsible for this state of affairs.

R. H. Giles, manager of the lumber and grain business at Lindsay, Neb., for Nye, Morehouse Wilson Co., of Fremont, that state, has absconded leaving a shortage of \$1,500 to \$2,000. He is thought to have gone either to join McGarigle or to California.

A meeting of the dealers in barley of Minnesota was held at the Huff House, Winona, Aug. 12. Quite a number were present and various topics were discussed. It was the general opinion of those present that the crop would be less than half of that of last year. The principal question under discussion was whether they should buy by the pound or by the bushel. Hitherto they have bought by the pound, but under the state law passed last

winter fixing forty-eight pounds as a bushel of barley and fixing a penalty for any violation of the law, it was deemed best to buy by the bushel, and this was agreed upon as a uniform basis of action.

A monster ear of corn from a farm near Council Bluffs has been sent to the Chicago Board of Trade. The ear measured two and a half feet in length, fourteen inches in circumference, the measurement being taken over the husk. The weight was three and a half pounds. It was sent as a specimen of Iowa's burnt-up crop.

John Boyer, of North Grove, Ind., was arrested Sept. 8 while trying to dispose of a load of timothy seed which he had stolen from the grain warehouse of Miller & Weaver. He had borrowed a horse and wagon of the above firm and had then helped himself to a load of grain.

The St. Paul, Minneapolis & Manitoba Railway Company has served an injunction on the Farmers' Warehouse Company at Claremont, Dak., enjoining them from using the right of way as grounds for their warehouse. The railroad commissioners have been appealed to in the matter.

One of the largest wheat fields in the world is that of Ex Congressman C. F. Reed, of Stanislaus county, Cal. It consists of 10,000 acres in one unbroken stretch along the bank of the San Joaquin River, and much of the land is protected by levees, as the stream is higher than the shore.

The Union Elevator Company of Des Moines, Iowa, in refitting their elevator, have added two large stands of elevators with shafting, pulleys, boxes, collars, three automatic scales, and one 600-pound hopper scale. The outfit was purchased of Geo. L. Jarrett, mill furnisher, Des Moines, Iowa.

The C. & N. W. Ry. Company, by the construction of a 64-foot tressel at Millbrig, Ill., has extended its side-track to the mill of Wm. Bell & Co., and that firm has let the contract to the Novelty Iron Works, of Dubuque, Iowa, for equipping two large storage elevators capable of handling 550 bushels per hour, direct from the cars.

An organization has been perfected among a few bonanza farmers of Nelson county, Dak., each of whom raises from six to twenty thousand bushels of wheat, to pool their issues and sell the grain this year all in a lump to the highest bidder for September or October delivery. They will have from 100,000 to 125,000 bushels to sell.

Sharpsville, Ind., which has only 250 inhabitants, claims this year to have been the banner town on Indiana roads in the shipments of wheat. The last ten days in July fifteen cars of wheat a day were loaded there, and this would have been kept up to the present time could the Lake Erie & Western Road have been able to furnish cars.

Geo. L. Blanchard, grain, flour and feed dealer, La Salle, Ill., failed Aug. 22, with liabilities amounting to \$40,000. To save the creditors something out of the wreck the flour and feed business was sold the day following. The assets of the firm are principally book accounts, which amount to \$60,000, 80 per cent. of which are uncollectable.

At a recent meeting of the railway commissioners at St. Paul, the following deputy grain inspectors were appointed: J. P. Low for Minneapolis; G. W. Kellogg, J. W. Cross and E. S. Kinbaird for Duluth. The rules and regulations as to inspection and weighing, to be established for the ensuing year are to be referred to the chief inspector and the secretary.

Corn in ten counties in the vicinity of Dayton, Ohio, says the *Drover's Journal*, will be a comparative failure. The usual yield in the valley is 18,500,000 bushels. This year quite half a million acres were planted in corn. Careful estimates are that the crop will average 18 bushels per acre or a total of 9,000,000 bushels of corn in the 10 counties, which is one-tenth of the average yield in Ohio.

Parties have bought land adjoining the new Dakota elevator at Buffalo, N. Y., and will build a new one next year to be called the Minnesota, to hold 3,000,000 bushels. Work has been begun on an addition to the Dakota, which will give it a capacity of 2,250,000 bushels, one-half of which will be finished this fall. Both elevators will be managed by a new company soon to be organized.

The Oroville, Cal., *Register* says: "At Colusa a barge can be loaded with a hundred carloads of grain and floated at a very cheap rate to tide water. The advantages of Feather River for years have been almost overlooked, but a few thousand dollars expended on this stream would open a natural highway for the shipment of wood, lumber, wool and grain to Port Costa or San Francisco."

The North Dakota Elevator Company filed articles of incorporation Aug. 25, with a capital stock of \$250,000. The business of the incorporation is to build, own and operate elevators in the territory of Dakota and state of Minnesota. The incorporators are Andrew J. Sawyer, Minneapolis; F. J. Sawyer, Lockport; William M. Lloye, John L. Chambers, Jamestown, Dak.; Albert G. Chambers, George G. Barnum, John MacLeod and Donald Morrison, Duluth.

The *Pioneer Express* of Pembina, Dak., says: "A couple of years since a railway started out from Minneapolis and has wandered out between Jim Hill's lines into the prairies of Dakota. Last winter it gave the farmers of Minnesota, near its line, from three to five cents more per bushel for their wheat than they had ever before, on the basis of freight plus Minneapolis markets. This road, the Minneapolis & Pacific, is planned and owned by Minneapolis parties, principally millers, and is being built to hold the wheat product of the Northwest for Minneapolis

mills. Both the Northern Pacific and Manitoba roads are now hauling to Duluth in preference to Minneapolis, and already we hear of a war on rates on wheat, and competition between Duluth and Minneapolis has begun."

The elevator men of Louisville, Ky., and the J. M. & I. Railroad Company are having trouble. Heretofore the grain dealers have been paying the railroad company \$1 each for every car of grain delivered at the elevators from the J. M. & I. yards, but they have concluded that this is extortionate and that the company should deliver the grain free of charge. This the company will not do, and both sides are determined, like the turtles of tradition, "not to let go till it thunders." The railroad company's yards were on the 9th inst. effectually blockaded with grain cars.

The side track of the Minneapolis & St. Louis road leading to the Alliance Warehouse at Waseca, Minn., was torn up Aug. 19 by the railroad officials without notice being given to W. D. Armstrong, buyer for the farmers, until it was too late for him to interpose. Much indignation is expressed by merchants and farmers over the affair. The cause is said to be the influence of an alleged local wheat ring conspiring with the company to reduce prices. They were paying two to eight cents above other houses. The Alliance company commenced recently, and was largely patronized by farmers. There are about two carloads of wheat in the warehouse.

The elevator people are struggling hard to keep the wheat now in their bins from going out. A party tried the other day to buy 80,000 bushels for shipment, and offered the full September price. Elevator people who seem to control a large part of the wheat now in store offered him what he wanted at October prices, but of course he could not go that far, and the trade fell through. A member of the Board suggests that this recent bad wheat talk emanated from the elevator interest for the purpose of frightening away buyers. The *Tribune* is prone to cry "rotten mackerel," and somebody has possibly been playing on its weakness for a selfish purpose. —*Chicago Daily Business*.

A great deal of dissatisfaction is expressed at Moorhead, Minn., by shippers, over the dockage for dirt in the wheat sent to Duluth. One shipper was docked 52 bushels and 20 pounds on a shipment of 436 bushels and 10 pounds of wheat. Another was docked 53 bushels on 470 bushels sent in. This is claimed to be excessive dockage and will practically stop the shipping of wheat from that point for the present. Inspector Shely, of Duluth, in answer to these complaints says: "If these people in Moorhead and elsewhere who are making such a fuss over wheat 'dockage,' as they call it, would remember that we have not docked their wheat at all, but have run it into cleaners and deducted the dirt taken out by them they would perhaps not make their peculiar statements. In the case of one car specially mentioned, investigation shows that the wheat was cleaned by elevators and weighed, and the dockage was the actual amount of dirt taken out according to the scales. It was as given—seven and one-half pounds to the bushel."

A FARMER'S PROTEST.

In a letter to the *Pioneer Press* from a farmer in Dakota, the writer makes a vigorous protest against the strict grading of wheat at Duluth. The season has been an unusually hard one for the farmers in the Northwest. In the early spring at seeding time the ground was very dry for lack of rain, and a terrible wind storm blew away the grain before it had time to take root, or else exposed the roots, and in May a severe frost killed the wheat where it was left bare and exposed. The drought continued, and under these evils it was a wonder that enough wheat was grown even for seed. At a very late day the rain came, but the weeds had already got the start of the grain and grew luxuriantly. Then at threshing time heavy rains set in and delayed the work and injured the wheat. As a consequence, while the grain is of excellent quality, it is mixed more or less with seeds, wild buckwheat, etc. The writer says he shipped two carloads to Duluth, the price at the elevator being 54 cents, and they were both graded No. 1 Northern and docked eight pounds per bushel; he says he does not kick at the dockage, for he does not expect to get fifty-four cents even for wild buckwheat, etc., but he does protest against being graded down on account of dirt when there is no fault in the grain, which after being cleaned turned out to be of the very best quality. He thinks it should all be graded No. 1 hard and the poor farmer not be robbed of the profits of his hard labor. The elevator men will probably retort by saying that when wheat has to be put through the cleaners nine times before being fit for market, something is due them for their share of work. There has been great complaint this year on account of the dirty condition in which wheat has been sent to Duluth, and the farmers will have to bear their part in the losses entailed by it.

THE NEW ELEVATOR.

The foundation for the immense new elevator of Armour & Co. is almost completed, and the entire building will probably be finished early in January. Its capacity will be 2,000,000 bushels, but it is not intended to carry more than 1,500,000, which is about all that can be covered by insurance. Mr. Armour denies that he is going to engage in the grain business to any greater extent than he has ever done, but says the elevator was found necessary to increase the storing facilities of the Milwaukee & St. Paul Road.

ITEMS FROM ABROAD

South of Russia reports maintain a good promise for wheat and rye.

Russia exported 45,000,000 bushels of wheat for the year ending Aug. 1.

Hungary has 19,000,000 bushels of wheat for export, against 10,000,000 bushels one year ago.

Russia has decided to permit the entrance, duty free, of foreign sacks for the exportation of Russian corn.

The German wheat crop is expected to be fully equal to, or over an average, rye and barley and oats all below average.

The average yield of wheat last year in New Zealand was twenty-five bushels per acre, and in some localities thirty-one bushels.

The timely use of disinfectants and the tilling of the fields in which the pest appeared has effectually abolished the Colorado beetle in Germany.

A good report is given of the French crop of wheat, which is expected to reach 300,000,000 to 312,000,000 bushels, or something more than an average.

The wheat crop in Spain is fairly good in most of the provinces. It is calculated that at least 12,000,000 bushels will be required to make up the deficiency in the supply of breadstuffs.

There are less than average stocks of wheat in the United Kingdom of home and foreign production, to carry over to the new crop year—the shortage being in home growth, which is reduced to practically exhaustion.

Wheat is the best crop of the year in England, but foreign grain to the amount of at least 17,000,000 quarters will be required to satisfy the home demands. Wheat is selling in country markets from 29 shillings to 35 shillings per quarter or 504 pounds.

Way, the Paris statistician, informs Le Duc that the best estimates now place the French wheat crop at 110,000,000 hectolitres, while the consuming wants are not less than 120,000,000. This leaves 10,000,000 hectolitres, or about 29,000,000 bushels to be imported from other countries.

The average wheat production of Roumania, covering a series of years, has been considered to be about 30,000,000 bushels; the 1886 crop was reported as 22,500,000 bushels, and for 1885 about the same, or 22,629,000. A recent report of the condition of Roumanian crops spoke of wheat as "probably better than in 1886."

In official circles in Germany it is believed that Prince Bismarck has finally decided to present a bill in the Reichstag increasing the duties on corn. Party demands supported by numberless petitions from all parts of the country, will force the government to introduce the bill, though it is certain to hamper the negotiations for a treaty of commerce with Austria, and lead to further protective measures in favor of other than agrarian interests.

The *London Miller* says the completion of the harvest in France is giving the markets of that country an abundance of new grain. The quality is generally satisfactory, and the samples weigh more than usual. The crop of wheat is estimated at 37,500,000 quarters, the home wants for seed and food at 40,000,000 quarters, and the consequent requirement of foreign wheat at 2,500,000 qrs., against 4,500,000 qrs. imported last year. The yield this year in Russia is large, and America will have less than usual to ship to that country in 1888.

THE MERCHANTS' LEAGUE.

The newly-formed association named the "Merchants' League of the Board of Trade of Chicago" is professedly aiming at several desirable objects, as set forth in its articles of association. One of its provisions is especially praiseworthy. It is that the committee on discipline shall obtain and bring before the directors of the Board of Trade proof of violations and evasions of its rules, and actively aid in the discovery and conviction of offenders. It shall also take similar action with regard to violations of state and national laws in transactions relating to the Board of Trade or by its members. The first part of this probably has for its foremost point the watching of parties who are suspected of cutting rates of commission. With this the public need have nothing to do; it is the business of members. But if the second part of the section be honestly carried out it will be a power for good. There is plenty of room for action. Not only the trading in puts and calls but undeniable gambling on the Board, especially if it involves running a corner in produce, or an attempt at one, is forbidden by law, and is an offense that ought not to be winked at because the parties are "respectable," or for any other reason. There is sufficient legitimate business to be done on a Board of Trade like that of Chicago, whose members handle some \$400,000,000 worth of property each year, without breaking the laws of the state or nation. The newly-formed body will do well if it succeeds in its avowed aim to cultivate and maintain among its members and other members of the Board a high standard of commercial honor.—*Chicago Tribune*.

THE AMERICAN ELEVATOR AND GRAIN TRADE.

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A. J. MITCHELL, - - - Business Manager.
HARLEY B. MITCHELL, - - - Editor.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., SEPTEMBER 15, 1887.

EXPORTS OF BREADSTUFFS.

The report of the Bureau of Statistics at Washington, issued Sept. 9, for the month of August, 1887, shows an increase in corn, oats, barley and wheat as compared with the same month for the previous year. The total value of the breadstuffs exported during August, 1887, was \$18,382,444, against \$15,116,881 for August, 1886. The value of the exports for the eight months ending Aug. 31, was \$118,800,492, against \$96,547,071 for the eight months ending Aug. 31, 1886.

The exports of corn for the month ended Aug. 31, 1887, were 1,706,265 bushels, against 1,435,123 bushels for the same time last year. There were 32,302 bushels of oats exported during August, 1887, against 22,899 bushels in August, 1886. The amount of wheat exported during the months named was 13,912,836 bushels for August, 1887, against 11,367,763 bushels for 1886. Rye stands at 100 bushels for August, 1887, against 12,985 bushels for August, 1886.

PRESIDENT WRIGHT'S IDEAS.

The proposition of the New York Produce Exchange to have the Chicago Board of Trade co-operate with it in holding one uninterrupted session daily, lasting from 10 A. M. to 3 P. M., New York time, does not meet with favor from the Chicago operators and members. Indeed, they characterize the proceeding as a specimen of Eastern "gall," and President Wright, in an interview with a *Tribune* reporter, expresses himself in no unmeasured terms. He asserts that the market prices are made daily in Chicago on the opening of the morning session of the Board of Trade, and that the Produce Exchange is only a big bucket shop where speculators wait until the reports of prices come in from Chicago, when they proceed to gamble on the quotations. These quotations, he says, is their stock in trade, and the speculative business of the Exchange is practically the same as any bucket shop, for the reason that on the Chicago Board of Trade the transactions make the market—as is the case in all branches of legitimate trade—while on the New York Produce Exchange the market (Chicago market) makes the transactions. The one is legitimate speculation, the other is gambling pure and simple. The first is beneficial to both producer

and consumer, as the price is bound to be the intrinsic value of the article when all the known and probable conditions of supply and demand are taken into consideration. Mr. Wright grows eloquent over the great value and importance of the Chicago Board of Trade, which sets the prices for the world, and whose decisions are looked for with anxiety in every country. He concludes his talk with the opinion that the Chicago Board of Trade will not be likely to inconvenience itself for the convenience of any bucket shop.

Perhaps the most potent argument against the change of hours, however, is the fact that the Western man is accustomed to lunch not later than one o'clock. To delay this important transaction for another hour would upset his whole internal economy. He would become so furiously hungry that he would not care whether wheat and pork went up or down; indeed, in its cooked condition, he is anxious for the latter product to go down, and the final hour of trading would be a weariness to the flesh, which would certainly result in no good to the trade. The New Yorkers will evidently have to keep their own hours, and we will do the same.

THE NEW COMMISSION RULE.

The adoption of the new commission rule by the Chicago Board of Trade by a majority of 144 out of a total vote of 702, has created no little stir among those especially affected by it. The rule is to the effect that an outsider who wants to buy a 5,000-bushel lot, must pay \$10 for the privilege, while members can trade in the same amount for \$5 commission. The penalty for the first offense is, suspension from all the privileges of the Board of Trade for not less than sixty days, and for the second offense, out-and-out expulsion. The rule will not particularly trouble the large speculators, but will fall heavily on those who depend on small country trade for their business. Some of these were in the habit of charging no commission at all, but would simply fill the orders sent them, themselves, by buying or selling against it in the market. The rate of commission on such business was one sixteenth of one cent per bushel or \$3.12½ on a deal of 5,000 bushels. Now they must charge one-fifth of one cent, or \$10 on 5,000 bushels, or run the risk of expulsion, and, as a consequence, will lose the greater part of their customers who are not able or willing to pay such a high commission. Already schemes are being developed which look to an evasion of the rule, and legal opinions will be invoked by both its partisans and opponents. Business on the Board is unusually dull, and the fault is laid at the door of the new rule. There is no doubt that if rigidly enforced, as it seems likely to be, a good many operators in a small way will come to grief. A number of members declare their intention of reporting any violation they may know of.

A FARMER'S PLAIN.

A DAKOTA correspondent of the *Chicago Tribune* deprecates the action of the "North-western wheat ring" in attempting, as he claims, to lower the price of wheat until the farmers have delivered the season's crop, by systematic reports of the immense quantity of grain raised in Dakota, Manitoba and surrounding districts, and which they say the railroads will be unable to move. He quotes the *Northwestern Miller* as publishing articles to the effect that there is a prospect of another wheat blockade this season in the Red River valley, and that in spite of the great elevator and railroad facilities, it will be impossible to handle the crop. He says such rampant twaddle is absurd on its face, because the crop of 1885 was much larger than that of 1886 and the railroads moved it with ease. There was really no blockade in 1885, but the elevator men filled their elevators to overflowing at the receiving points and refused to ship out regularly as cars were offered; then of a sudden a demand was made for cars all along the line, which taxed the railroads beyond their power, and when they could not procure all they asked for, the Minne-

apolis men refused to receive wheat because they could not store it. The farmer of course was the one to suffer, as he could not sell his wheat to meet his financial engagements.

The same game, the *Tribune* correspondent claims, is to be tried this year, when if exposed, as they deserve to be, the ring will come to grief, as there is no foundation for the reports they are spreading abroad. From men who are perfectly disinterested in the matter, reliable estimates have been secured which go to show that the crop which has been reported at 10,000,000 bushels in Manitoba will not exceed 3,000,000 bushels, while the crop of the Red River valley will not be as large as that of last year; and he says there will be no difficulty in handling all the farmers can offer.

BENEFITS OF THE ERIE CANAL.

A writer in the New York *Husbandman* thinks the farmers of that state do not realize how many benefits they have reaped from the opening of the Erie Canal, or they would not so strongly oppose the proposed improvement of that and similar waterways. Before the Erie Canal was built, it was by hard labor alone the farmer was able to live. His wife and daughters did all the spinning and weaving for the family; in some counties they were obliged to travel 200 miles by wagon to reach the market for their produce; wheat was a drug on the market, and merchants would not receive it for goods. The Erie Canal was built in 1825, and in three years after wheat rose in price to over \$1 per bushel, and wool went up to 75 cents a pound. The canal cost about \$80,000,000, and has been enlarged and improved, until now it is one of the grandest works of the kind in the world. It is seventy feet wide and seven deep, with a slope wall on the tow path side nine feet high, with aqueducts which extend the entire length and culverts to carry all streams and rivulets beneath. It has locks 120 feet long and eighteen feet wide.

The chief benefit to the farmer is cheaper transportation for all his products, insuring him a larger profit for his labor. Especially is this true of grain, and the business of handling this crop, crowding as it does into a few months in spring and fall, demands every facility possible for its prompt and easy shipment. If the canals are not large enough to handle this industry they must be increased in size, and it will be money in the farmer's pocket to see that this is done as quickly and thoroughly as possible. It is stated that the canal has already paid its entire cost of construction and enlargement, and many millions in addition, and most of this on Western freight alone.

Among the new advertisements in this issue is that of Cutler & Co., of North Wilbraham, Mass., advertising their Automatic Adjustment Mill. This mill is the result of much practical experience and study, and was originally designed by Messrs. Cutler & Co. for use in their own business. Its good points were so numerous that after a thorough test, not only by themselves, but by others, in every day operation, they decided to place it on the market. Those who are interested in grinding mills can obtain a neat pamphlet, fully explaining and illustrating the Automatic Adjustment Mill by addressing Messrs. Cutler & Co., as above.

At the recent meeting of the Inter-State Commission held in Minneapolis, an argument was heard in the complaint of E. B. Raymond of Mazeppa, Minn., against the Chicago, Milwaukee & St. Paul Road, charging discrimination in rates against that place in favor of Red Wing, St. Paul and Minneapolis. The road was given twenty days in which to prepare its argument in defense. Testimony was taken from prominent millers and railroaders on the workings of the milling-in-transit system. The meeting was attended by large delegations from fifteen cities in the Mississippi valley, who are in favor of the maintenance of carload rates as against the movement of Eastern jobbers in favor of making 100 pounds the unit.

Editorial Mention.

JOHN F. SMITH, Tara, Ont., says: "I value your publication highly."

THE "Corn-Cribbers' Trust" is the latest in the trust line. A number of Nebraska dealers formed it some time ago, but it has been abandoned.

THE bucket shop is having a hard time of it. The Chicago Board certainly means business, and the telegraph companies evidently appreciate the fact.

JAS. F. AGARD, of Rockford, Ill., who advertised two elevators at Roscoe and Harlem, Ill., for sale in this paper, writes us that both of them have been sold to W. W. Kitchen.

A LETTER lately received from Waldron & Walker, Jackson, Mich., says: "We find your AMERICAN ELEVATOR AND GRAIN TRADE too valuable to lose. 'Keep it coming.'"

DENISON B. SMITH, secretary of the Toledo Produce Exchange, has just completed his tenth year of service in that office. He is seventy years old, but vigorous in mind and body.

MESSRS. E. S. BRISTOL & GALE, Chicago, Ill., advertise in this issue the celebrated Taylor Horse Powers so well known throughout the country. They also make a specialty of feed mills, fodder cutters, etc., and invite correspondence.

CHAS. T. BARNES, of 335 W. Monroe street, Chicago, informs us that the trade in his Improved Chicago Car Mover has been unusually good, particularly in the South. The good points of this handy implement make friends for it wherever it is introduced.

THE Philadelphia & Reading Railroad Company is preparing to take an active part in grain shipments from Philadelphia, which have heretofore been controlled by the Pennsylvania Road. Sixteen steamers have been chartered to carry the grain.

THOSE who have damaged grain will notice the advertisement in this issue, among our commission cards, of Messrs. E. & H. C. Edwards, 712 Royal Insurance Building, Chicago. They buy or sell all sorts of damaged grain, making a specialty of burnt or smoky grain.

THE cry about "bad wheat" in the Chicago elevators resulted in little wool. There was some wheat that was "off" having been in store for several years; but the prompt action of the Board of Directors remedied the trouble, and the wheat was promptly got rid of.

THE visible supply of wheat as compiled by the secretary of the Chicago Board of Trade on Sept. 10, was 31,210,796 bushels; of corn 7,106,852 bushels; of oats 4,387,972 bushels. A year ago the visible supply of wheat was 44,870,283 bushels; of corn 13,627,279 bushels; of oats 4,628,087 bushels.

THE Chicago Board of Trade did the right thing in disciplining "Old Hutch" for violating its rules. It would have been better to have expelled him if that had been possible. He has presumed altogether too much on his eight or ten million dollars, and finally came to believe that he was a law unto himself. It is useless to attempt enforcing rules if certain persons are to be exempt from their operation simply through their wealth. "Old Hutch" has been going around, metaphorically speaking, with a chip on his shoulder for a long

time. The Board of Directors knocked it off at last, and, strange to say, the Board of Trade still lives.

THE Railroad and Warehouse Commissioners in the case of the Michigan Central Railroad, charged with disobeying the law of Illinois regarding hopper scale weights, found the evidence clearly against the railroad, and have issued an order entering suit against the Michigan Central Co., to compel them to comply with the law, or cease doing business in the state.

MAYOR ROCHE, of Chicago, when interviewed by Senator Bell, of Peoria, in regard to the projected ship canal scheme, would not commit himself, but said, "I want a sewer to drain Chicago, and if the canal project can go through, all right; but I want Chicago drained anyway. As a matter of fact, Chicago would be greatly interested in such a measure, but whether this succeeds or not, we want the city drained." The mayor will arrange for a Chicago delegation to visit the convention.

A WRITER in the *Northwestern Farmer and Breeder* encourages the farmer to look for better prices for his wheat later in the season, if he is able to hold on to it, and care for it himself. He bases his statement on the shortness of the crop in the United States and Canada as compared to that of last year, and the amounts that will be required from other countries by England, France and probably other foreign powers. He adds, however, that if the farmer is required to pay elevator and storage charges until late in the season his expenses will eat up all the profits.

THE Cincinnati *Price Current* thinks that the annual reports of the Chamber of Commerce of that city are getting to be a matter of ancient history. Thus, the report for the year ending August 31, 1886, has just been issued. This is a good deal like the United States census reports. But the Cincinnati Chamber of Commerce is not the only commercial body that is dilatory in the matter of publishing its annual reports. A little hustling to get the reports and while the matter they contain is still valuable from a commercial standpoint of view would be appreciated all around.

KERSHAW & Co., of this city, have sued the firm of Maurice Rosenfeld & Co. for damages in a big wheat contract made in last June just before the great collapse in prices. Rosenfeld & Co. bargained for and bought of Kershaw & Co. 5,000,000 bushels of wheat at 92½ cents, to be delivered in June and paid for on delivery. Kershaw & Co. were ready and willing to deliver the wheat as per contract, but the defendants requested them to resell the wheat on their account. June wheat had in the meantime taken a big drop, and the plaintiffs were forced to sell Rosenfeld & Co.'s 5,000,000 bushels at 74½ cents, the aggregate being just \$800,000 less than it cost. The defendants were liable for this deficit, and promised to pay, but failed to do so.

A WELL-WRITTEN and sensible editorial in the last issue of the *Kansas Farmer*, reviews the question of wheat-raising in that state, which business many farmers are almost persuaded to abandon, on account of recent losses through low prices, insects, etc. The writer argues that low prices must be offset with decreased expense in production, which, with the improved machinery now used, can easily be done. As to the insect plague, it is well known that dry seasons multiply, while wet ones destroy these pests of the farmer. As wet and dry seasons generally succeed each other with some regularity, it is expected that next year a wet summer will relieve the country in a great measure of the chinch-bug, which has committed such ravages this year. The writer thinks farmers should have great elevators and storehouses of their own, where they can store wheat and draw money on it as they need it. The ground should be well prepared, and rotation

of crops persevered in. The outlook for the future is hopeful, and he urges the farmer not to give up the raising of wheat because discouraged in the past.

CHICAGO elevators contained Sept. 10, 5,638,532 bushels of wheat, 2,331,803 bushels of corn, 1,307,240 bushels of oats, 68,471 bushels of rye, and 155,256 bushels of barley; total, 9,501,302 bushels of all kinds of grain, against 16,349,665 bushels a year ago. For the same date the secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 31,210,796 bushels of wheat, 7,106,852 bushels of corn, 4,387,972 bushels of oats, 281,534 bushels of rye, and 414,081 bushels of barley. These figures are larger than the corresponding ones a week ago by 524,207 in wheat and 269,844 in corn. The visible supply of wheat for the corresponding week a year ago increased 1,904,628 bushels.

JOSEPH WAGNER, of Ogle county, Ill., has sued the firm of Bensley Bros., brokers and commission merchants, and composed of John R. Bensley, George E. Bensley and D. C. Wagner. The complainant employed them to buy and sell for him on the Board of Trade for a period of fourteen years. During this time he claims to have paid them over \$25,000 for commissions, interest and alleged losses. He says he believes the defendants frequently canceled contracts made in his behalf before their maturity, and that they frequently failed to execute his orders to purchase or sell, but nevertheless charged him commissions. He thinks on a fair accounting they will be found to owe him \$20,000, and asks that they be compelled to produce their books that he may prove the allegations of his bill.

PERFORATED sheet metals are now largely used in more than a score of industries, and the field for their use is widening every day. The head-piece published in the full-page advertisement of The Harrington & King Perforating Co. in this month's paper will interest every reader, as it shows the forms of perforation employed for some uses, although the samples given are few compared with the innumerable samples which the Harrington & King Co. can show at their office of the work which they do and are prepared to do. Their plant at Nos. 224 and 226 North Union St., Chicago, is as complete and extensive as could be desired for varied, accurate and prompt work. Here they make perforated metals for every conceivable purpose. Among their specialties are their flax reel and flax tester sieves, in which many of our readers will be interested. If you need anything in the perforated metal line, the Harrington & King Perforating Co., 224 and 226 N. Union St., Chicago, hold themselves ready to supply it.

THE Open Board of Chicago has served notice on the Board of Trade that they will present a petition for a writ of mandamus to the Supreme Court at Ottawa, Sept. 20, to compel the latter to let the public have the quotations of the market prices on grain and provisions. It will be shown that the Board of Trade is an organization incorporated under the laws of Illinois for the purpose of buying and selling agricultural products, establishing their market prices and disseminating them among the public. The business has reached such a magnitude that country buyers and shippers are absolutely dependent upon a knowledge of its prices in order to transact their business safely. All the grain of the West is graded according to rules established by the Board and is received into Chicago's immense warehouses and elevators according to these grades. It will be shown that the Board controls the entire grain and provision business of the West, and that it is impossible for a country shipper to buy or sell without danger of loss unless full and immediate transmission of the Board's market prices are permitted. It is argued that if the Board is permitted to withhold its prices from the public, widespread disaster will be entailed upon both producer and con-

sumer, and that Chicago commission merchants not members of the Board will also be subjected to great hazard in all their dealings, as market prices have come to be dependent wholly on the Board's prices. As the Board really makes the market prices, the members only will profit by the knowledge of them, and they will have the opportunity to perpetrate gross frauds upon the outsiders. The petition will therefore pray that a writ of mandamus be directed against the Board of Trade and the various telegraph companies having instruments in its building compelling them to furnish to the public the market prices. The fight promises to be a bitter one, as both parties are determined to win.

ATTENTION is invited to the card on another page of The Gutta Percha and Rubber Mfg. Co., 159 and 161 Lake street, Chicago. This well-known company has furnished belts for many elevators, among which are some of the largest houses in the country. They believe that their success in this direction substantiates beyond a doubt the claims which they make for their "Red Strip Rubber Belting." Read what they say in this particular. This company also manufacture hose for fire protection and other purposes, sheet and piston packings, etc. Their catalogue "E" will be sent to those who will take the trouble to write for it.

THE friends of the Hennepin Canal feel offended that they were not recognized in the call for the convention to be held at Peoria, Oct. 11, to consult on the improvement of the Illinois River, etc. The *Davenport Gazette* says that by the terms of the call no friend of the Hennepin Canal is expected to attend the Peoria convention, and that if any should so far forget themselves as to go, they would be ruled out on arriving there. The *Gazette* thinks that as the friends of the canal have heretofore done all they could to obtain appropriations for the Illinois River, and the project has many influential supporters in Congress, any scheme to divert attention from it will meet with a decided protest. The call for the Peoria convention should be amended so as to at least mention the Hennepin Canal. It is not yet too late to do the proper thing, and the projectors of the call should bear in mind that it is never well to make enemies of those who could serve us as friends.

THE Rock Island Road has issued some new rules governing cars stopped in transit to finish loading or to partly unload. Those relating to grain are as follows: On shipments of grain and flaxseed, when the stopping station is on the direct line between point of shipment and destination, one stop to finish loading can be made without extra charge. No portion of the contents loaded at original point of shipment to be left at the stopping point. Cars containing grain, loaded at Chicago, Rock Island and Pacific stations, may be stopped to be cleaned or shelled (for which \$2 will be charged), without obtaining special order from some general freight office; but when billed from stations on connecting lines, authority for stop must always be obtained. On mixed carloads of grain and seeds from one consignor to one consignee, the carload rate on each kind of grain or seeds will apply, provided that all but one of the different kinds of grain and seeds are sacked.

A LOCAL paper says: "George Ward, of Geddes & Co., was on 'Change yesterday, after a four months' absence in Europe. He says the information in well-posted circles there in regard to the California wheat deal is that it was run by and in the interest of the two men who posed as brokers. They obtained leave from Mackay to draw on the Nevada Bank for as much money as they might want, and when he found through the London correspondent of the bank how much had actually been drawn, he was astounded and gave orders to stop at once. The explanation is a very plausible one, as it accounts for several features in the business which could not be understood on any other hypothesis." A dispatch from San Francisco, dated Sept. 13, says James C. Flood

has resigned the presidency of the Nevada Bank. The vice-president, George L. Brander, also resigned his position. Ex-Senator Fair was first elected a director, and then elected to succeed Mr. Flood as president.

DIRTY WHEAT AT DULUTH.

The hue and cry raised in the Northwest over the dockage of wheat for dirt at Duluth ended in an investigation by the Railroad and Warehouse Commissioners of Minnesota a week ago. The dockage has run from 10 to 25 per cent. on account of dirt, straw, foul seeds, etc., which appeared to many as extraordinary. The result of the examination made by the commissioners completely exonerates Duluth from the charges made of excessive dockage. In regard to the complaints made, Mr. R. C. Burdick, manager of the Great Northern Elevator at Duluth, says:

"All past experience in the matter of judgment on the part of the inspectors isn't worth a copper—they are simply bewildered, and in their desire to do justice to all parties cannot place any figures on extremely dirty wheat, but order it to the elevators to be cleaned. Such lots of grain as they have set a figure on are in many cases wide of the mark. For instance, here is a list of five cars in which a dockage of 2 pounds per bushel was placed on three of them and 2½ on the other two. After being cleaned and weighed I find that two of the 2 pound cars have shrunk 3¼ pounds and the other 2½ pounds to the bushel. The two 2½ pound cars shrunk 3¼ pounds each, and in round numbers we are out nearly ten bushels to each car. Mr. Rupley, superintendent of the Lake Superior system, showed me yesterday a list of 33 cars on which they will experience a loss of 320 bushels, they having cleaned out that amount more dirt than was estimated by the state inspector. No matter how much or how little the dockage is, some of the worst ones we are obliged to clean seven or eight times—for we must clean it till it suits the state inspector, and until he pronounces it fit for shipment, though it shrinks twice or three times the amount he has placed upon it. Some of the cars I named above were cleaned seven times, and whether we clean it once or seven times, the cleaning charges are the same—half-a-cent covers it all. Now while business is slack, Inspector Shely is ordering in most of the worst ones 'to clean,' which means we are to clean them at once, and this is done under the supervision of a state weighmaster, who carefully weighs it 'in the dirt' and again after it is cleaned one, two or seven times, as the case may demand, the difference of course being shrinkage in cleaning. In a list of twenty cars which we have cleaned under Mr. Shely's orders, the lightest shrinkage on any one car is 22 bushels and the heaviest is 53½ bushels. Perhaps some of them are the cars alluded to by the Moorehead parties."

The fact is that the farmers in the Northwest are excessively careless in the matter of sending their wheat to market. The moral is, that they should clean the wheat themselves before shipment, or else be prepared to accept the dockage which is inevitable.

CHANGED HIS MIND.

"William!" said the old gentleman at the breakfast table.

"Sir?"

"I am not pleased to see you so much in the company of young Jobson. He is a dissipated young man, and he gambles. I should prefer that you avoid his society."

"He gambles, father, I suppose. He can afford to. He has just made \$100,000 in the wheat corner."

"Well—still—you had better be careful."

After a little while William rises from the table.

"William!"

"Sir!"

"If Mr. Jobson is disengaged this evening you can bring him up to dinner. Perhaps a little good example may save him—and, William, you can just tell him something about the new mining company I am floating.—*San Francisco.*"

THE BUCKET SHOP WAR.

The Chicago Board of Trade has been moving vigorously and, as it appears, effectively against the bucket shops. It secured some time ago the passage of a law prohibiting bucket shops, but this did not do away with the business altogether, since the bucket shops, though they could not do business in their own offices, gained a considerable revenue from outside concerns which they kept supplied with quotations, the court enjoining the Board of Trade from refusing to give these. Now, however, the Board of Trade has succeeded in persuading the telegraph companies to cut off their services from the bucket shops, so that although those concerns get their quotations from the Board of Trade they are no longer of any use to them. The city authorities also have taken action against the bucket shops, cutting all their wires which were strung above ground. Chicago,

evidently, is rather an unsatisfactory location for bucket shops just at present.—*Bradstreets.*

Fires, Casualties, Etc.

J. C. Bruckman, brewer, Cincinnati, Ohio, has died.

The brewery of P. Mugler, at Red Bluff, Cal., has been burned.

The large grain elevator at Carbondale, Kan., has been destroyed by fire.

H. G. Gaylord, of the grain firm of H. G. Gaylord & Co., Chicago, Ill., has died.

The granary of Walter Coe & Sons, Comstock, Mich., has been destroyed by fire; loss \$10,000.

Roland Kirkpatrick, of the flour, and grain commission firm of that name at Philadelphia, Pa., has died.

The Modesto Brewery at Modesto, Cal., owned by A. Baer, has been burned. Loss \$3,000; insured for \$2,380.

J. B. Hartley & Co., grain dealers, Middletown, Ohio, were burnt out some days ago. Loss, \$8,000; well insured.

Pearce & Ryan's distillery at Nashville, Tenn., was destroyed by fire Aug. 23. Loss, \$20,000 to \$30,000, and but little insurance.

Myrtle, the five-year-old daughter of D. J. Watson, a prominent grain dealer of Assumption, Ind., died from eating a box of vegetable pills.

In an extensive fire at Baltimore, Md., Aug. 4, the upper floors of the grain and produce commission house of E. B. Owens & Co. were destroyed.

The grain warehouse belonging to McMillan & McLean at Glencoe, Ont., was burned Aug. 27, with all its contents. Loss \$1,500, mostly covered by insurance.

The grain warehouse of John Shultz at Parkhill, Ont., containing a large quantity of wheat, was totally destroyed by fire Aug. 17. Loss \$7,000, nearly covered by insurance.

A fire at Collingwood, Can., destroyed the freight sheds of the Northern Railway and ruined the docks on which they stood. About \$1,900 worth of grain was destroyed.

The elevator belonging to the Stanford (Ky.) roller Mills, gave way and scattered about 4,000 bushels of wheat around the wreck. The building was old and the timbers rotten.

The elevator belonging to Murdock & Sons at Murdock, Douglas Co., Ill., was destroyed by fire Sept. 1, with its contents, consisting of 18,000 bushels of grain. Loss \$12,000; insurance \$4,800.

A destructive fire at St. Louis, Aug. 11, communicated to Schilling & Snider's Brewing Company's malt house, destroying 30,000 bushels of malt, causing them a loss of \$27,000; fully insured.

In a destructive fire which occurred at Rawson, Ohio, on the 6th inst., a large grain elevator containing about 20,000 bushels of wheat was burned. The flames started from a spark from the engine of a sawmill.

A scaffold on the McCord & Cofield's grain house at Alexandria, Minn., gave way precipitating B. J. Covel and H. A. Carlson thirty feet. Covel had a leg broken and his back injured. Carlson was badly hurt about the head.

L. R. Smith, of the grain firm of Smith & Oliver at Breckenridge, Minn., died Aug. 23, of typhoid fever. He was forty-five years old, and leaves a wife and two children. Mr. Smith had been for many years a prominent citizen of Breckenridge, and his death is a great loss to the town.

While two laborers were at work in Elevator No. 3 at West Superior, Wis., Aug. 24, the scaffolding on which they were standing gave way, and they fell to the bottom of a grain bin sixty feet below. Both died in half an hour after being picked up. They were middle-aged men, and leave families.

We regret to announce the decease of Mrs. Henrietta Ulrich, mother of E. R. Ulrich, a prominent grain dealer at Springfield, Ill. Mrs. Ulrich died at Carthage, Ill., Aug. 30, 1887, at the advanced age of 90 years. She was born at Reval, Russia, and was a daughter of Justus John Von Reisenkampff, collector of the port of Reval.

Samuel T. Hensley, formerly a prominent grain and stock man of Indianapolis, Ind., died at his home in Terre Haute, that state, on the night of Aug. 24. He was born Jan. 15, 1811, near Dayton, Ohio, and was in his seventy-seventh year at the time of his death. In 1863 he was prostrated with an abscess on his liver, which confined him to his bed for four years, and eventually caused his death.

The town of Walnut, Pottawattamie Co., Iowa, was visited by a destructive fire Aug. 15, which destroyed among other buildings the C. R. I. & P. depot and two large elevators. The largest of these belonged to Clayton & Scofield, and was valued at \$10,000. It contained about 20,000 bushels of grain, which was burned. The other elevator belonged to I. A. Spangler, and was worth about \$8,000. It also contained a large quantity of grain. Insurance very light.



Tickets of membership to the Produce Exchange, New York, have been dull at \$1,700

Privileges of membership in the Chicago Board of Trade are quoted steady at \$1,950.

The New York Produce Exchange is endeavoring to do away with the short afternoon sessions of the Boards in New York and Chicago, and extending the long session.

The opening of the Produce Market Exchange Call Board at San Francisco, Aug. 22, after being closed for nineteen days, was a matter of great interest to outsiders as well as the regular brokers and dealers, and the session was well attended.

The electric bell used to regulate the clerks making deliveries on the floor of the Chicago Exchange will be superseded by the large 1,200-pound bell formerly used by the old Board of Trade. It has quite a history, being made from a portion of the old courthouse bell.

B. P. Hutchinson, one of the oldest and wealthiest members of the Chicago Board of Trade, and known all over the country as "Old Hutch," has been found guilty by the board of directors of transacting business out of hours contrary to the rules and regulations of the Board, and has been suspended for ninety days.

The Western Union Telegraph Company has acceded to the demands of the regular Board of Trade of Chicago, and has withdrawn its wires from the floor of the Open Board, thereby cutting off that concern from all telegraphic communication with the regular Board. The Open Board, however, declares that it will not quit the business.

The new Chamber of Commerce building now in course of erection at Cincinnati will be the finest building of the kind in the United States. Among other special features of its interior finish will be a marble entrance to the auditorium and a marble gallery. It will be ready for occupancy in about one year. Mr. Charles H. Rutan, of Brookline, Mass., has succeeded H. H. Richardson, of Boston, deceased, as architect.

The Indianapolis Board of Trade propose to erect an imposing building for their own use, and have under consideration several desirable sites. Plans for the building have been sent in by several architects, with estimates from \$85,000 to \$100,000 and more. A proposition which meets with favor is to erect a building five stories high of pressed brick and ornamental stone work, of which the upper floors could be rented for offices, thus bringing in a large yearly revenue.

The Postal Telegraph Company and its ally, the North American, have complied with the terms of the Board of Trade and cut off their connection with all the bucket shops, and in consequence have been reinstated in the privileges of the exchange. They have been charging that the Board of Trade has shown favoritism to the Western Union, allowing them to do business on the Board, while at the same time a bucket shop at Cincinnati is circulating Chicago Board of Trade quotations all over the country over the Western Union wires.

A new feature in the war which the Chicago Board of Trade is waging against bucket shops is the appearance in the field of the Underground Conduit Company. This company is charged by the Board with furnishing the bucket shops with wires within the city limits. The manager of the Board of Trade quotation department was instructed to notify the Underground Company that if it did not stop furnishing facilities to the bucket shops, in violation of the state law, an indictment by the next grand jury would be asked for.

No Chicago quotations were received Sept. 3 at the Merchants' Exchange, St. Louis, and much comment was made until the receipt of a telegram from the Chicago Board, saying: "We temporarily suspend your quotations to observe results on Western and Southwestern bucket shops." This being regarded as an intimation that the St. Louis Exchange was furnishing those bucket shops with Chicago quotations aroused a good deal of indignation. The exchange proposes to maintain a dignified silence, and will neither ask for an explanation nor for a renewal of quotations.

An exciting election took place Sept. 13 in the Cincinnati Chamber of Commerce. There were three tickets in the field, one headed by Levi C. Goodale for president, and the other two by L. L. Sadler. The contest was a hot one. One hundred and thirty votes were cast, and Goodale was elected. The successful crowd procured a brass band, and had a hilarious time. The new president is the representative of Bradstreet's Commercial Agency, and a member of the Board of Exposition Commissioners. The entire independent ticket was elected with the exception of four directors.

The Merchants' League of the Board of Trade of Chicago, an organization similar in character to the one now in operation in the New York Stock Exchange, has, after much hard work, been at last started. The new association embraces in its membership 100 of the leading members of the Board, and its objects are to cultivate among its members and the members of the Board of Trade a high standard of commercial character, and to secure to

them the benefit of united action in furtherance of their legitimate interests. Under the present arrangements on the Board punishments are few in proportion to the violations of the rules.

SHRINKAGE OF CORN.

Prof. Scoville, of Kansas, has been experimenting to ascertain the shrinkage in corn after it is ripe and placed in the crib. Reports of his tests are given in the *Kansas City Indicator*, from which we learn that six different varieties weighed Oct. 6 and stored in a room without any artificial heat, showed an average shrinkage of 15½ per cent. thirty days after storage. One variety lost a little over 8 per cent., while with another the loss was 25 per cent. On Feb. 28, 145 days from the date of gathering, the lot was weighed, and the average loss on the whole amounted to 21½ per cent., and in one variety, called the Mammoth, the loss was exactly one-third, or 33¼ per cent. From the above the farmer may make a very close calculation as to the advance in price of corn which he must obtain in spring to make it equal to the loss sustained in shrinkage during winter.

A PERUVIAN CEREAL.

A plant called quinoa, which is a cereal indigenous in the higher districts of Peru, and which is there used as an article of food, is being grown to some extent in California, and the attention of agriculturalists is called to its edible qualities.

It has been tried in Germany on a small scale, but was not received with much favor, appearing to be an article of food for which the taste must be cultivated, as was the case with potatoes, tomatoes, tea and other things when first introduced into public notice. The grain is prepared for table in various ways similar to the methods of cooking beans, and is regarded by the Peruvians and many travelers as a great delicacy. The plant has been grown for several years on the experimental grounds of the University in California, at which place seed can be obtained for free distribution.

Another Peruvian plant which thrives well in California is the coca, which has recently become so useful as an anesthetic in medicine. The Indians in Peru use it daily and assert that it is the best remedy for that difficulty of breathing which is felt at high elevations, and also that it is very nutritious and tends to prolong life.

THE GERMAN FARMERS.

While the crops in Germany this year have been excellent, the farmer feels but little encouraged on account of the very small profits made on his labor. In the future he has nothing to look forward to, as the increase of facilities for transportation in Russia and India, and the lowering of ocean rates, all point to an increased competition by those countries and the United States, and a consequent still further reduction of prices. The European farmer is a man of but few resources. He is content to plod along for generation after generation, according to the ways of his forefathers, and when brought to a sudden halt and obliged to turn out of the beaten path into new fields of labor he is bewildered. It will take time to teach him new ways and means of making his land profitable when he finds that the growing of grain alone is no longer so. The next generation will profit, however, by his experiences and failures.

CORN WILL BE KING.

A grand jubilee week in celebration of the immense crop of corn grown this season in Iowa, will be observed at Sioux City beginning Oct. 4. A palace constructed entirely of corn will be erected, arches of corn will be built over the streets and the business houses decorated—all with corn; the ladies will wear ornaments made of corn, and in every way the cereal will be displayed and honored. Every day during the jubilee there will be parades representing the various manufacturing and business interests of the city, with a grand display of fireworks and torchlight processions. Prizes will be offered for the best agricultural exhibits. Not only Iowa but Nebraska, Minnesota and Dakota will send the products of their great cornfields. Twenty thousand dollars has already been subscribed for the display.

A RUSSIAN WATERWAY.

The cost of transportation has been a serious obstacle in way of Russian exports of corn and wheat. Now, however, that the government has taken the matter in hand, she may yet prove a most formidable rival to the United States in supplying foreign markets. One most valuable improvement about to be commenced is the dredging and clearing the channel of the river Don, one of the largest and most important of the rivers of Europe, yet one which has not been utilized except for a short distance on account of its numerous shoals and obstructions. This year about \$100,000 has been appropriated by the Russian minister to render the river navigable for 720 miles, which will place Elefs, the principal grain market of that country, in direct communication with the Black Sea.

The transport rates, which by the roundabout route hitherto used were thirty-three copecks the pood, will be

reduced to six copecks the pood. The first elevator ever built in Russia is now being erected at Elefs, whose history is intimately connected with that of Peter the Great.



Warehousemen—Advances on Grain.

Where a commission merchant to whom grain has been consigned for sale has possession thereof as the apparent owner, and delivers it to a warehouseman who makes advances on it to him, such warehouseman may keep the grain as security against the true owner thereof, provided he does not at the time know that the claimant is the true owner. Where, however, the warehouseman knows that the commission merchant is using the claimant's property to raise money for himself, he stands in the commission merchant's place and cannot hold the grain. So held by the New York Court of Appeals in the case of *Dorrance vs. Dean et al.*, reported in the *Central Register*.

Warehouse Receipt.

Where bulky articles stored in a warehouse are sold, it is only necessary to tender the warehouse receipt to the vendee to constitute delivery. *Hayden vs. Demetis*, 53 N. Y., 426 (1873); *Newcomb et al. vs. Cabell*, 10 Bush. (Ky.), 460 (1874); *Ferguson vs. Northern Bank of Kentucky*, 141 Bush, 555 (1879). But the property mentioned in the receipt must be separated from any other goods of the same kind belonging to the same owner and stored in the same warehouse.

Warehouseman's Policy.

G. & Co. had a policy on an insurance company indemnifying them "against loss or damage by fire to the amount of \$5,000 on cotton in bales and general merchandise, their own, or held by them in trust or on consignment, or sold but not delivered, contained in the brick, metal-roof building known as 'Gwathmey's Warehouse.'" The policy permitted concurrent insurance, and insured only the interest of the insured in the property, and there was a provision that goods held on storage must be separately and specifically insured. G. & Co. were warehousemen, and their depositors, by reason of this provision in their policy, had taken out separate policies. The company paid G. & Co. their loss under the policy, which was a part only of \$5,000; but as the companies which had insured the depositors refused to pay them until they had exhausted their remedies which these companies maintained the depositors had under G. & Co.'s policy, the firm brought suit upon their policy for the benefit of the depositors and at their cost, disclaiming any demand for themselves. The trial court rendered judgment for the plaintiffs for the benefit of the depositors for the contributory rate, upon the principle that the company was bound for contribution, the insurance being double upon the goods destroyed, and greater than their entire value. They carried the case (Home Insurance Company vs. Gwathmey) to the Supreme Court of Appeals of Virginia, where the judgment was reversed. Judge Lacy, in the opinion said: "A policy of insurance is a contract, and is to be governed by the same principles as govern other contracts. Its language is to receive a reasonable interpretation. Its intent and substance as derived from the language used, should be regarded. There is no more reason for claiming a strict, liberal compliance with its terms than in ordinary contracts. Full legal effect should always be given to it for the purpose of guarding the company against fraud and imposture. Beyond this substance would be sacrificed to form; words would be followed rather than substance. In this case the depositors, not relying upon the warehousemen's insurance, did, specifically and separately, amply secure themselves as to their own goods, and they make no contention here except as they are required for contribution, and it was offered by the defendant to prove that it was the understanding all around that the warehousemen did not undertake to insure their depositors, nor did the depositors understand of claim that they were in any wise concerned in the warehousemen's policy; but this offer was excluded and the jury instructed that the insurance taken out by G. & Co., after deducting their own loss, was double insurance, and was liable to contribute to the depositors' losses. Double insurance may be defined to be additional and valid insurance, prior or subsequent, upon the same subject, risk and interest effected by the same insured, or for his benefit, and with his knowledge and consent. Owners of different interests in the same property may insure separately their interests. Here the plain words of G. & Co.'s policy exclude any liability for the goods of the depositors. It is limited to the interest of G. & Co., and the indemnity is not to exceed their interest. If we are to confine our action to the enforcement of the contract as made by the parties to it, there can be no contribution; there is no double insurance here. We certainly do not propose to make a contract to support the views of the other companies. The defendant has paid G. & Co.'s loss, and there can be no further claim made upon it. The depositors can recover upon their policies, and the judgment must be reversed and the suit dismissed at the cost of the plaintiffs."—*Commercial Bulletin*.

Press Comment.

PLAYING WITH LOADED DICE.

The bucket shop's loaded dice are in the shape of orders executed for his account at the regular exchange, be it stock, produce or petroleum exchange. Those orders are given and executed in direct opposition to the play of his customers. If the latter buy stocks, the bucket shops send orders to sell enough to break the price to the point which will wipe out the customers and put their money into his pocket. In a dull market the dealer has no difficulty depressing the price of a stock on sales of a few hundred shares, and wiping out the margins deposited with him on nominal purchases of thousands of shares. In other words, he sacrifices hundreds of dollars at the Stock Exchange, and wins thousands of dollars from his customers.—*New York Indicator*.

ENFORCE THE BUCKET-SHOP LAW.

Men engaged in carrying on bucket shops and corporations furnishing them with facilities for doing business could justly enough claim consideration before the enactment of the Riddle bucket-shop law, but since then the keepers of such shops, no matter under what evasive titles, have been law breakers, and the corporations furnishing them with quotations have been doing so in defiance of law.

People who do not care or know much about bucket shops or the operations of the Board of Trade will yet take notice of this defiance of the underlying American belief that all good citizens of this country are necessarily law abiding, and will heartily approve any action of the authorities that will teach the bucket-shop proprietors and their abettors that the laws of the state of Illinois are supreme, and not to be violated without the infliction of severe penalties.—*Mail*.

CORN IS KING IN NEBRASKA.

Corn is still king in Nebraska. In spite of terrible ravages by drouth and chinch bugs, which have greatly damaged the crop in surrounding states, the outlook in Nebraska is highly encouraging. Of the reports gathered by the *Bee* from forty-five counties of the state, but few are of a discouraging character. Taken as a whole, the crop is reported to be in excellent condition. From parts of the state where the most damage had been feared, the recent rains have put new life and vigor into the plant and a full average yield is expected. In some counties, indeed, a yield is promised far in excess of any previous year, while the counties that report a marked decrease are largely in the minority. In this, Nebraska is more fortunate than her sister states of Iowa and Kansas, where corn in many sections is reported burned beyond all hope of redemption. With corn safe, we can look forward to the coming year with undiminished confidence in Nebraska's prosperity.—*Eve*.

THE WEIGHT OF WHEAT.

A bushel of wheat is worth only what it weighs. If it occupies a space out of proportion to its weight, the extra matter is more or less valueless. If it fills the measure, the seller will naturally wish it to be taken for what it seems. The buyer is interested in having it stripped of its seeming, which it sometimes is to the extent of some pounds in the bushel, by the simple process of weighing it. The growers of inferior wheat, and in many parts of England all the wheat is below the mark, are interested in the maintenance of the old table of corn measure still taught to our school children. But it is obvious that the public interest lies quite the other way. All seeming, all padding, all buckram, all mere outside is an imposition on the public. The superabundance of fibrous envelope to a grain of wheat is like the bone and fat thrown into the butcher's scale. It is the heart of the grain, not the husk, that makes the bread, and it is the heart that weighs. It is very true that weight itself has to submit to a correction, and consequently a reduction. If the wheat is damp, and most of it is after a bad harvest, the purchaser will not pay for the water, which answers no other purpose than to entail delay in drying.—*London Times*.

BEARISH VIEWS ON WHEAT.

N. B. Ream said to an interviewer who asked him what he thought about wheat: "If a man should buy a barrel of flour for home consumption, he and his family might eat it up before the price got much lower, but to the man who should ask me for advice to govern speculative investment I should say, 'If you don't know enough to keep away from the long side of wheat, give your money to your wife.' I know women have sense enough to keep money. What good reasons are there for thinking that wheat will average higher this crop year than last, or than for either of the past four years? The last four crops have been marketed within a range (Chicago prices) of say 68¢@76¢. The cash price has occasionally gone above 76¢, but it has not stayed there long. There is no great or radical change in the trade conditions from those that have governed for the past four years. The world is producing an average crop, and the American crop is up to the average. There has been no remarkable increase in the number of consumers, and no notable decrease in the producing capacity of the wheat fields. On the contrary, 12,000 miles of new railroad have been built, and an immense new agricultural territory opened up and brought nearer to the consumptive markets. There may not be any backward steps taken, but the great business boom

started on capital borrowed eighteen months ago, when money was cheap, has spent itself, and the men who incurred obligations then will be pinching themselves for the next few years to pay out. Money to invest in speculative enterprises will not be plenty enough to throw away this year or next. There may not be any material decline in the price of wheat, but there is certainly nothing in the situation to warrant the hope that values will go higher immediately."

RESPONSIBILITY FOR THE ACTS OF AN AGENT.

The new commission rule is breeding dissatisfaction and confusion among members of the Board of Trade, and the official interpretation has intensified rather than allayed this feeling. The first construction placed on the interpretation was that commission merchants could divide commissions with non-member brokers who might send them business, but a study of the language of the report has opened their eyes to the unpleasant fact that full commissions must be charged such outside brokers except where they are duly accredited agents—not agents in name but agents in fact. Commission merchants having agents become responsible for the acts of such agents not only legally, but to the Board of Trade as well, to the extent of being disciplined by suspension or expulsion for infractions of the rules of the Board by their agents. This is a very grave responsibility that few care to assume. They had rather provide their best paying customers with memberships than assume such indefinite and weighty responsibilities. It is understood that the Board members will be given a chance in the near future to vote on a proposition to amend the agency clause.—*Chicago Daily Business*.

AMERICAN BOATS ON CANADIAN CANALS.

Congressman Burleigh, of Whitehall, is not easily upset by Buffalo squalls. He has written a sharp letter, which we print in another column, in response to the criticisms made by Buffalo and other newspapers touching his resolution asking that Canada abolish tolls upon her canals. If Mr. Burleigh had taken the trouble to say at the convention what in eighteen days after he writes to the newspapers' much good would have been accomplished, as it would have provoked one of the most interesting discussions the convention could have chosen. Viewed from the standpoint of the carrier—the boatman—Mr. Burleigh makes out a case, though our Buffalo friends may not see it. The Champlain route is a highly important one, and ought to receive, and doubtless will receive, due attention at the hands of the next legislature; but in taking this into consideration the general interests of the state must not be overlooked. If equity alone is to be considered, then our boatmen should receive the same advantages and privileges on Canadian canals as the Canadian boatmen do on New York canals. Mr. Burleigh does not, however, make it quite clear whether in case his resolutions were respected by the Dominion authorities Canada would not be able to divert at least some of the business rightfully belonging to us. It is true that Canada does not need to be told by an American canal convention how best she could deprive the West of her trade, but we must not forget that there are selfish people in Canada, and that New York herself hesitated some time before she made her canals free. One thing Mr. Burleigh has demonstrated, which is that the American boatman in Canadian canals has to pay from 10 to 12 per cent. interest on his investment in tolls alone, while the Canadian boatman on New York canals pays nothing. What do our Buffalo friends say to this?—*Canal Advocate*.

THE SEPTEMBER CORN ESTIMATE.

No two persons arrive at the same conclusions in trying to figure on the Government corn crop estimate for September. Statistician Dodge, in his glee at mystifying the "speculators," forgets that the only known object the Government can have in issuing monthly bulletins during the summer and autumn is to enlighten the people as to the crop prospects, and he flippanently tells those who ask him to explain his bulletin "that November will be time enough for results." The Agricultural Department cannot long be run for the gratification of the small revenges, petty spites and personal piques of a garrulous and peevish old man who is clearly in his dotage. If long service entitles him to special consideration, he should be retired on a pension. If not, he should be retired for the good of the service.

Now as to the meaning of the September report on corn. The statistician has put himself on record as saying that 26 bushels of corn per acre is an "average crop." His final crop averages for a series of years point to the conclusion that the yield on a basis of a possible condition of 100 would be about 28 bushels per acre. Mr. Dodge's private information on the subject may warrant him in the statement that 26 bushels per acre is an average crop of corn. According to the published final estimates of the Agricultural Bureau for a series of years he puts the average yield per acre too high. But it is a waste of time to discuss the matter until the final figures are in for this year. It is enough to know that if the same system of figuring governs in the statistical bureau this year as for the past decade, a possible condition of 100 would mean a yield of 28 bushels per acre. Computing on this basis, the crop this year on an acreage of 78,000,000 would be nearly 2,200,000,000 bushels, of which 72.3 per cent. would be 1,590,000,000 bushels, in round numbers.

By another process about 1,630,000,000 bushels are reached. In the bulletin it is stated that the condition is four points lower than last year. A reduction of four points from the condition of last year would make the probable yield per acre 20.9 bushels, and the total about 1,630,000,000 bushels, as above stated. Private pointers

emanating from the Agricultural Bureau, or confidentially near it, the day before the bulletin was issued, put the figures at 1,620,000,000 bushels.—*Chicago Daily Business*.

DAKOTA'S WHEAT CROP.

There is even a wider disagreement this year than last in regard to the wheat yield of Dakota. Persons in Minneapolis persist in the statement that a magnificent crop has been obtained, their latest announcement being that the record of Dakota this year is the champion one of the world. On the other hand, reports come in daily from people who profess to be close to the wheat fields that the yield was not more than an average, and that the quantity realized is very much diminished by the heavy rains that have fallen almost without pause since the harvest work began. The consequence is that the grain of that section is so damp and dirty that the warehousemen are generally refusing to receive it except at the risk of the owner in regard to condition. It is even said that some of the elevator companies have ordered their houses to be closed for the present, not being willing to incur the risk, and seeing the utter impossibility of receiving all that would be tendered them. The grain is reported to have been improperly shocked, and was then stacked while wet. A large portion of it was thrashed too soon, and part of the remainder is already heating, with a strong chance of becoming musty. The prospect for the growers is by no means a pleasant one, especially as they are unable to obtain for even good grain much over the 40 cents per bushel which recent experiments have shown to be the minimum cost of raising wheat with all the modern appliances for saving labor. The rest will have to be sold at an actual loss, and apparently there is a great deal of the inferior kind which must be pressed forward in order to avoid further spoiling and offered for sale in such volume as to make it a drug for the time being. The trade in this city have got hold of the idea that the Government figures now due will warrant the placing of the crop of the United States this year at about 430,000,000 bushels; but even if this should be so the supply of the grade of No. 2 spring from the yield of the Northwest promises to be unusually small.—*Chicago Tribune*.

SOME COMPARISONS AS TO GRAIN SHIPMENTS BY PORTS.

The exports of breadstuffs from the United States by ports for the fiscal years ended June 30, 1887 and 1886, were as follows:

Ports.	Year ended June 30,	
	1887.	1886.
New York.....	\$61,484,827	\$49,284,063
Boston.....	14,653,542	12,647,476
Philadelphia.....	12,069,437	6,340,267
Baltimore.....	29,541,384	15,526,254
New Orleans.....	7,728,946	4,259,248
Pacific coast.....	26,835,019	25,042,008
Other ports.....	10,123,039	8,811,068
Total.....	\$162,426,194	\$122,810,379

According to these figures the largest increase was at Baltimore, amounting to \$14,000,000, while New York gained \$12,000,000, Boston \$2,000,000, Philadelphia \$5,700,000, New Orleans \$3,400,000, and the Pacific coast ports \$900,000. Baltimore gained \$3,000,000 more than the combined gain at Boston, Philadelphia and New Orleans, and just the same as New York and Philadelphia combined. The rate of gain at New York was only a little over 25 per cent., against nearly 100 per cent. at Baltimore.

Comparing the exports of wheat we have:

Ports.	Year ended June 30,	
	1887.	1886.
New York.....	40,563,930	21,281,928
Boston.....	1,500,340	1,388,964
Philadelphia.....	9,804,690	2,376,999
Baltimore.....	13,903,298	3,694,310
New Orleans.....	4,345,553	30,702
Pacific coast.....	24,081,764	25,081,195
Other ports.....	6,609,537	2,956,736
Total.....	100,809,212	56,764,834

At Baltimore there was a gain of nearly 300 per cent., while at New York the increase was less than 100 per cent., although, of course, in the aggregate number of bushels the gain at New York was larger than at any other port.

In the exports of flour Baltimore gained 1,700,000 barrels, the shipments for the year ended June 30, 1887, being 2,618,507 barrels, against 910,135 barrels for the preceding year, while New York gained only 810,000 barrels, Boston 570,000 barrels, Philadelphia 700 barrels, New Orleans 30,000 barrels, and the Pacific ports 24,000 barrels. For the year ended June 30, 1886, Boston exported 780,000 barrels of flour more than Baltimore, while for the year ended June 30, 1887, Baltimore's flour exports exceeded Boston's by 350,000 barrels.—*Baltimore Journal of Commerce*.

The third trial of the suit of James H. and James A. Cunningham against the Evansville & Terre Haute Railroad Company for \$40,000 damages sustained by the burning of the plaintiffs' starch glucose factory at Vincennes, Ind., in July, 1879, ended very suddenly some weeks ago, on account of the death of the elder Cunningham, which occurred at Madison, Ind. The case goes over to the October term of court to give time to make new parties to the suit in place of the deceased plaintiff.

WATERWAYS

President Hill, of the Manitoba Road, has contracted for twelve steel boats to ply from Duluth to Buffalo with the grain of the Manitoba. They will cost \$1,500,000.

The question of Sunday labor on the Welland Canal has been under consideration by the Dominion Government, and as the result of much labor by the Christian people in Ontario, the decision is in favor of observing the Sabbath as a day of rest.

The quantity of United States grain passed through the Welland Canal to United States ports increased from 47,000 tons in 1880 to over 150,000 tons in 1886. The total quantity passing both ways has grown from 194,173 tons in 1882 to 464,478 tons in 1886. The quantity that passed from Lake Erie to Montreal in 1886 was 128,000 tons less than in 1880.

The Western Waterways Convention will be held at Memphis, Oct. 20 and 21. A large representation is expected from all along the Mississippi valley, and a strong pressure will be brought to bear upon Congress for appropriations for necessary improvements. It is hoped that some practical plan will be presented which can be teted upon to the benefit of all concerned.

The Chicago Board of Marine Underwriters have agreed upon the following trip rates on grain insurance: From Chicago to ports on Lake Michigan, 30 cents; to ports on Lake Superior, 50 cents; on Lake Huron, Sarnia and Detroit River, 40 cents; Georgian Bay ports, 50 cents; Lake Erie, 50 cents; Lake Ontario, 60 cents; to Ogdensburg, 65 cents; to Montreal, \$1. These rates are 10 per cent. higher than the last issue on May 15.

Mr. George H. Wellington, of Allegany county, Maryland, speaking for the people of that state in regard to the Chesapeake and Ohio Canal, says: "The great question in Western Maryland is, Shall the Chesapeake and Ohio Canal be turned over to a railroad, and forever closed to the people of the state? Western Maryland wishes the state to retain the canal, and asks the Republican party to put a plank in its platform guaranteeing this."

The following items regarding the progress of work on the Panama Canal are of interest: Twenty thousand men are on the isthmus; 415 miles of special railroad have been built; 14,000 cars, 28 steamers, 200 vessels, 304 small iron works, 48 drags, 96 hereulean excavators, 36 powerful perforators, and 468 immense pumping engines are at work. Light for night work is supplied by 7,000 lamps, and 175 engines are constantly engaged.—*Boston Transcript*.

The *Toronto Globe* says: "Sailing masters complain that there is not enough water in the Morrisburg Canal. The same is true of the Cornwall Canal, and vessels have to go pounding through, every now and then grazing the bottom. As a lake captain put it, 'The Cornwall Canal is now turned into a mere millrace for the benefit of certain manufacturers, and the purposes of navigation, for which the canals were intended, have become quite a secondary matter.'"

A New York *Times* editorial says: In one of the addresses upon the Nicaragua Canal delivered on Monday at Columbia College, J. W. Miller related that in 1870 a steamer, drawing ten feet of water, left New York, and in less than a month was anchored in Lake Nicaragua within eleven miles of the Pacific Ocean. A sailor going aloft forty-one feet could have overlooked the divide between lake and sea, and could have seen ships sailing upon the Pacific. When this is the case it would seem that the problem upon which discoverers had been at work nearly 400 years, and which has absorbed the energies of Balboa, Cabot, Davila, Ponce de Leon, Cortez and many others in more recent times, might not be so difficult of solution.

A convention will be held at Peoria on Tuesday, Oct. 11, at 11 a.m., for the purpose of giving expression to the sentiment of the people on the proposed improvement connecting the waters of Lake Michigan with the Mississippi via the Illinois and Desplaines rivers to Joliet, and a wide and deep canal from Joliet to Lake Michigan. A deep interest is manifested in this coming meeting, and prominent men throughout the West are giving every encouragement to those instrumental in calling the meeting. Senator Bell of Peoria, who is a member of the State Drainage Commission and secretary of the committee who called the convention, has interviewed Mayor Roche of Chicago, and urged him to secure the co operation of the citizens to make the convention a success. He says the subject is a matter of national importance. The canal would be a perpetual competitor of the railroad, and give the whole Mississippi valley direct communication with the sea. In case of war the canal would be the salvation of the lake cities. By the terms of the present treaty with Great Britain, the United States is not permitted to have men-of-war on the great lakes. But if hostilities were commenced with England, for instance, a whole fleet of war vessels could come down the St. Lawrence and devastate all the great cities on the chain of lakes. With a ship canal from the Mississippi, a fleet of American vessels could be fitted up all along the river line, and sent to the rescue of the lake cities. At a meeting of the Illinois State Grange held Sept. 1, the executive committee presented a resolution, which was unanimously adopted, recommending the subordinate and county granges of

Illinois to take immediate action in favor of the general government improving the waterways connecting the Mississippi and Lake Michigan through the Illinois River and Michigan Canal, and recommending that delegates be sent to the convention at Peoria. From the present outlook the meeting will be a large and interesting one.

Lake traffic is unusually heavy this season, and vessels are being eagerly sought for and increased rates are being offered. The ore shippers are behind in their contracts, and want all the tonnage they can charter. Grain freights are stronger now than at any time this season. Duluth will soon have immense consignments of wheat to move down the lakes, and Chicago shippers will probably have to bid higher rates in order to secure vessels.

The Sault Ste. Marie Canal was built in 1855, and enlarged and improved in 1881, but is at present not large enough for the great amount of business carried on through it, and will have to be still further enlarged. It is said this canal has the second largest lock in the world. It is built of solid masonry, is 560 feet long, 80 feet wide, with walls 40 feet high, the lift 18 feet, and the depth of the water in the basin 16 feet. This lock belongs to the U. S. Government and cost three million of dollars, and will accommodate, four at a time, the largest vessels ever brought to these waters. A new and still larger lock to cost five millions is now being constructed. The canal now has a larger daily traffic than the great Suez Canal.

"When you come to have them by yer fifteen years you finds them out." Then followed some revelations based upon personal observations. To the world in general the mule is a stubborn, vicious and unintellectual beast, not safe abait the beam. No one credits the animal with ambition, character or any feelings akin to human moods; but to all this the driver emphatically objected. "Kick? why, of course; it is the way they talk, same as a dog's tail. They won't kick you if you treat them decent. I have had them white ones more'n five years, and never a cross word out of 'em. That old wheeler knows as much as I do. When I'm asleep on his back and we comin' to a bridge, he ups and lets drive with his heels, much as to say, 'Who's runnin' this team?' Nights I always sleep on the long stretches, 'cause I know he'll slack up and drop the line for a boat to pass when he sees a light near to. He follows me 'round like a dog.'—*The Century*.

The annual report of Maj. O. M. Poe, engineer in charge of the improvements upon the northern coast of Michigan, the St. Mary's River, the Saginaw River, Detroit River and minor harbors along Lake Huron, has been received at the War Department. Maj. Poe devotes considerable space to the most interesting feature of his report, the improvements upon the St. Mary's River and the falls canal, of which he says: The project now in hand for the improvement of the canal is to increase the present sixteen-foot depth to twenty feet, and to replace the locks at present in use by a single lock 800 feet long, 100 feet wide, and with a minimum depth of twenty-one feet on the mitre sille. The water draft of vessels and the tonnage, both registered, and freight in consequence is so increased as to demand immediately the improvement set forth. As an argument in favor of pushing the work upon the canal to completion, the engineer makes an interesting comparison, showing the tonnage passing through the Suez and St. Mary's Falls respectively during the year 1886. It is shown that 3,035 more tons passed through the latter than the former. The cost of operating the canal last year was \$22,138, less \$452 received for dry docking vessels.

The *Montreal Herald* says: "The commissioner of inland revenue has just issued the first supplement to his report for 1886. It deals entirely with canal statistics for the navigation season of 1886, and general comparisons of these with those of preceding years. There was an increase in the receipts of all the canals except Burlington Bay, St. Peter's and Newcastle district canals, the net increase being \$48,754, or about 16 per cent. From this amount, however, \$11,346 was refunded by order in council. The quantity of United States grain passed through the Welland Canal to United States ports shows a very large increase, having risen from 47,000 in 1880 to over 150,000 tons in 1886, but notwithstanding this large increase in volume of traffic and the refund of 18 cents per ton on grain passed on to Montreal, the quantity that passed from Lake Erie to Montreal in 1886 was 128,000 less than in 1880. The total quantity of United States freight passing both ways through the Welland Canal to United States ports has grown from 194,173 tons in 1881 to 464,478 tons in 1886, and the total quantity to and from Montreal has increased from 206,403 in 1881 to 261,315, the gain being wholly in Eastward bound freight, while the Westward bound has decreased over one half. The total quantity of grain of all kinds that passed down the whole length of the St. Lawrence canals to Montreal in 1882 was 230,055 tons; in 1884, 174,496 tons, and in 1886, 272,133 tons, an increase over 1885 of 137,309 tons.

THE SOUTHERN CROPS.

It is estimated that the corn crop of the South will be the largest ever raised, exceeding the crop of 1886 by over 50,000,000 bushels, and that of 1884 by 107,000,000 bushels. This will be of vast benefit to the Southern farmers, as they have been obliged to depend upon the West for their corn. This year they will be self-supporting in this respect, and will probably have enough corn to last them for two years. Wheat, oats and other crops have also done well, and there is a brighter outlook for this section of country than for many years.

AVERAGE YIELD OF GRAIN.

The average yield of grain per acre for fifteen years has been:

Years.	Wheat. Bus.	Corn. Bus.	Oats. Bus.	Rye. Bus.	Barley. Bus.	B'kw't Bus.
1872.....	11.9	30.7	30.1	14.1	19.2	18.1
1873.....	12.7	23.8	27.7	13.1	23.1	17.2
1874.....	12.3	20.7	20.0	13.4	20.6	17.7
1875.....	11.0	29.4	29.7	13.0	20.6	17.5
1876.....	10.4	26.1	24.0	13.8	21.9	14.5
1877.....	13.9	26.6	31.6	14.9	21.3	15.6
1878.....	13.1	26.9	31.4	15.9	23.6	18.2
1879.....	13.8	29.2	28.7	14.5	20.0	20.5
1880.....	13.1	27.6	25.8	13.9	24.5	17.5
1881.....	10.1	18.6	24.7	11.6	20.9	11.4
1882.....	13.6	24.6	26.4	13.4	21.5	13.0
1883.....	11.6	22.7	28.1	12.1	21.1	8.9
1884.....	13.0	25.8	27.4	12.2	23.5	12.6
1885.....	10.4	26.5	27.6	10.2	21.4	13.8
1886.....	12.4	22.0	26.4

AGRICULTURAL RETURNS FOR GREAT BRITAIN.

The following are comparative figures of area of leading crops in Great Britain, and number of live stock, as returned on June 4, for three years:

	1887.	1886.	1887.
Wheat, acres.....	2,317,362	2,285,905	2,478,318
Barley, acres.....	2,085,204	2,241,164	2,257,346
Oats, acres.....	3,087,989	3,081,596	2,940,490
Potatoes, acres.....	559,648	553,961	548,731
Cattle, number.....	6,441,271	6,646,688	6,597,964
Sheep, number.....	16,146,249	19,175,999	16,537,607
Lambs, number.....	9,812,519	9,344,719	9,997,028
Pigs, number.....	2,299,343	2,221,475	2,403,380

Adding 70,000 acres for the wheat area of Ireland makes a total of 2,387,000 acres for the United Kingdom. It is not likely that the average yield will exceed thirty bushels per acre, at which the crop would make an outturn of 71,600,000 bushels. Last year's crop was 63,348,000 bushels, and the annual average for ten years previous to 1886 about 87,000,000 bushels, or about 15,000,000 bushels more than the crop this season.

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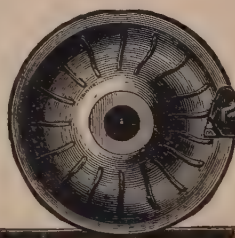
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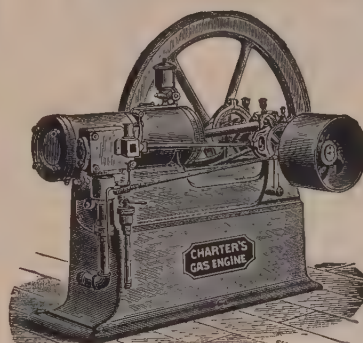
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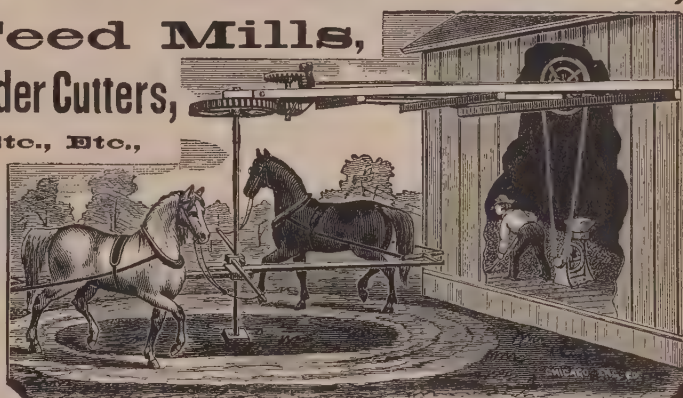
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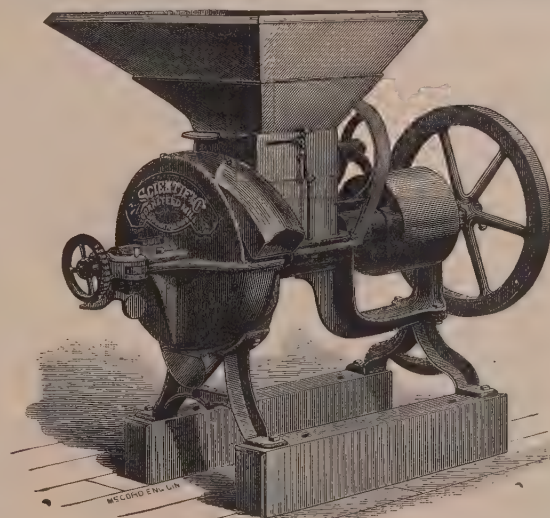
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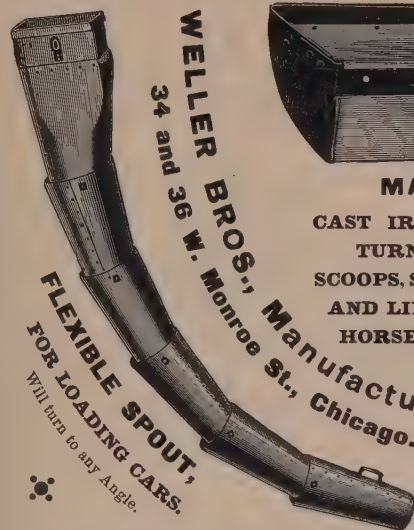
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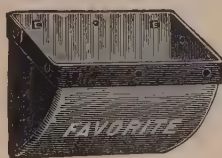
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C. E. Chinnock. New York, July 28th, 1887.
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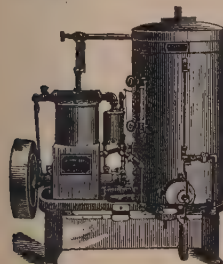
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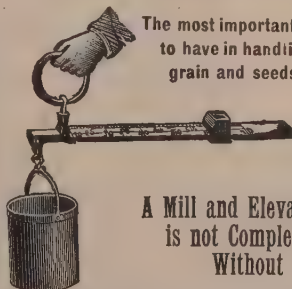
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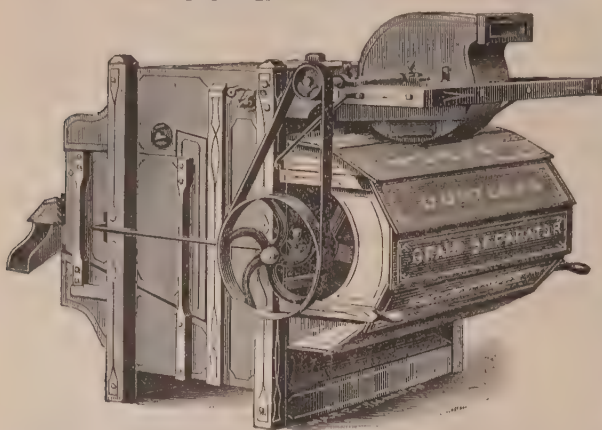


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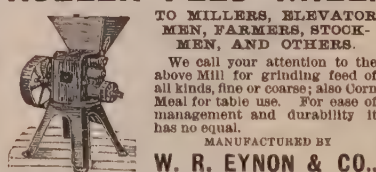
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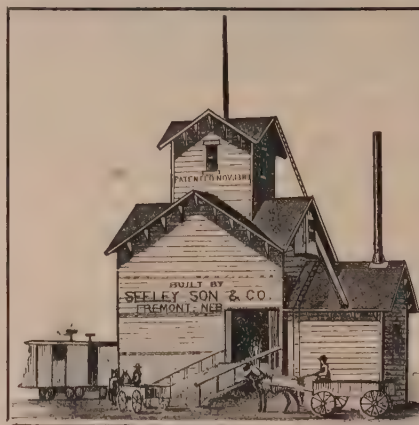
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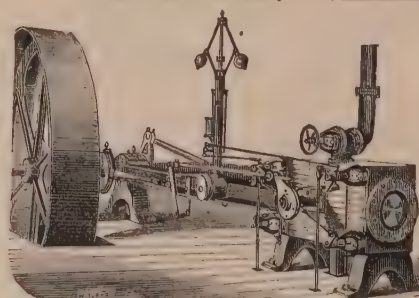
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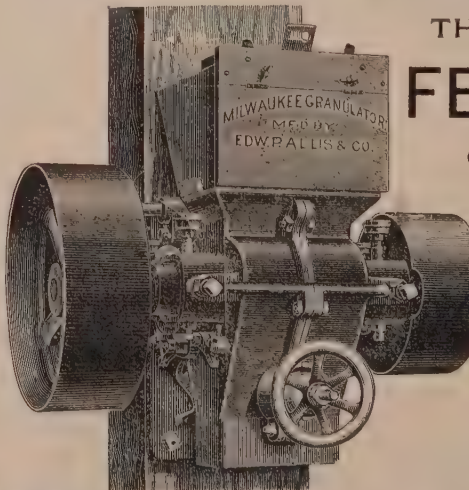
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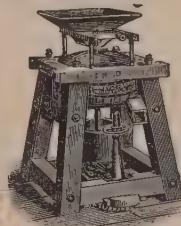
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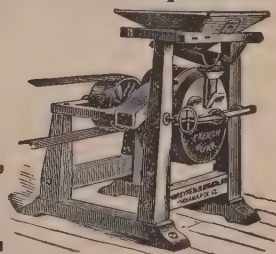
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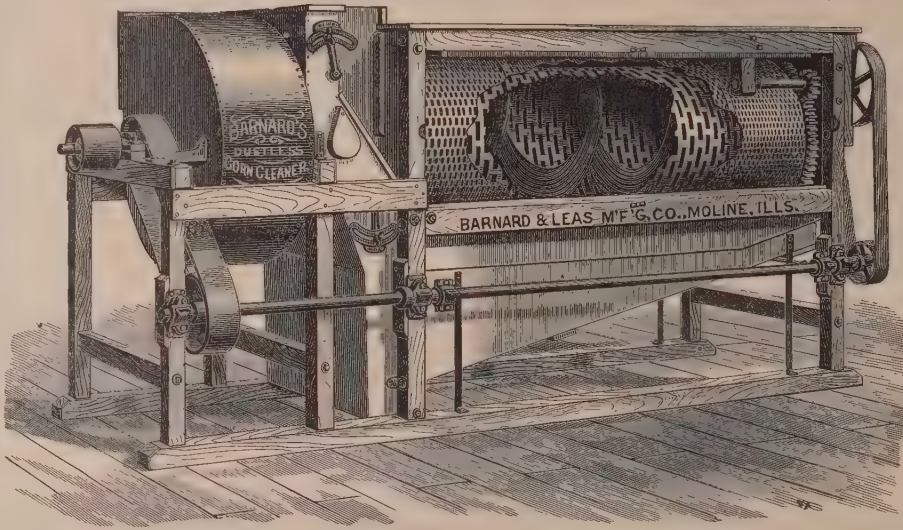
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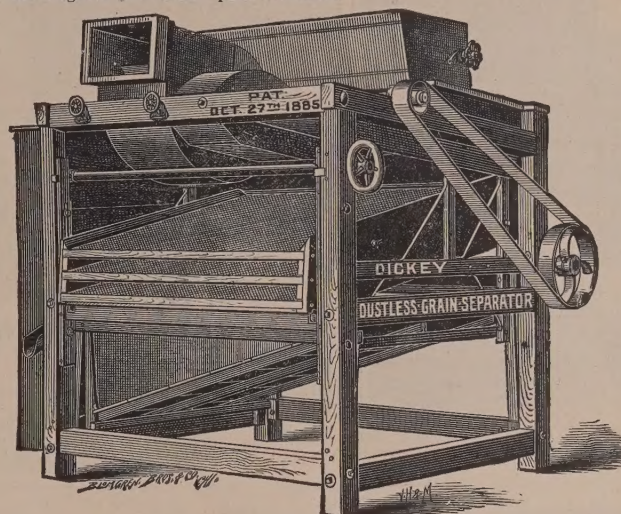
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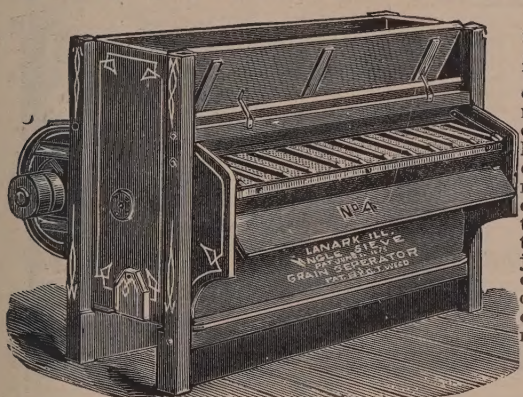
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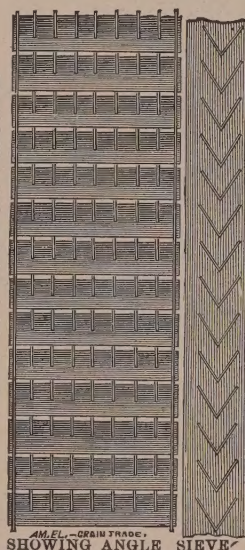
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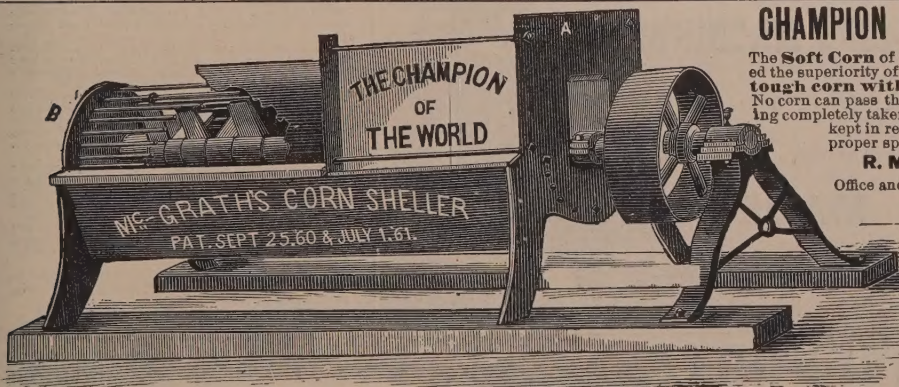
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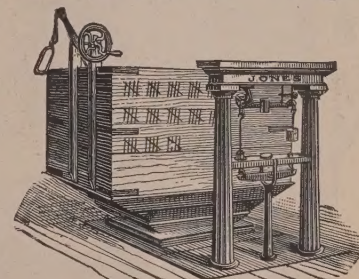
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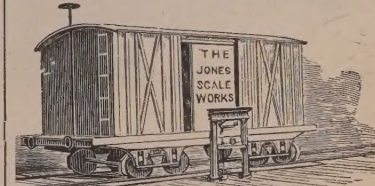
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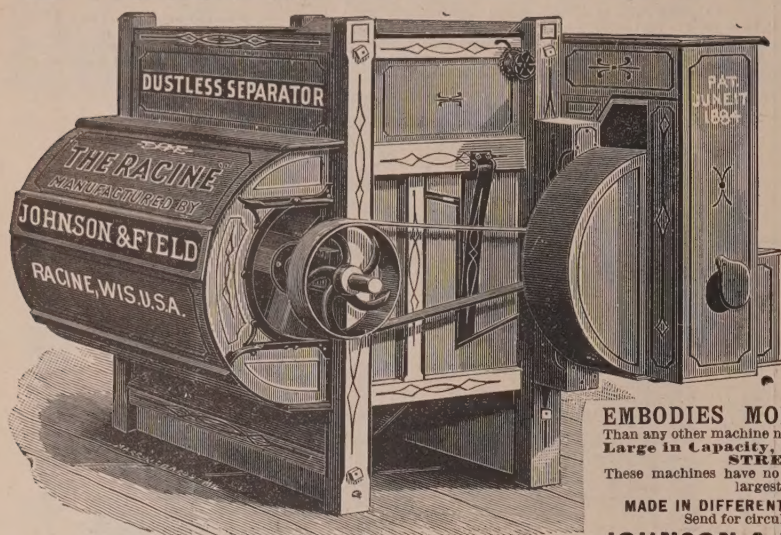
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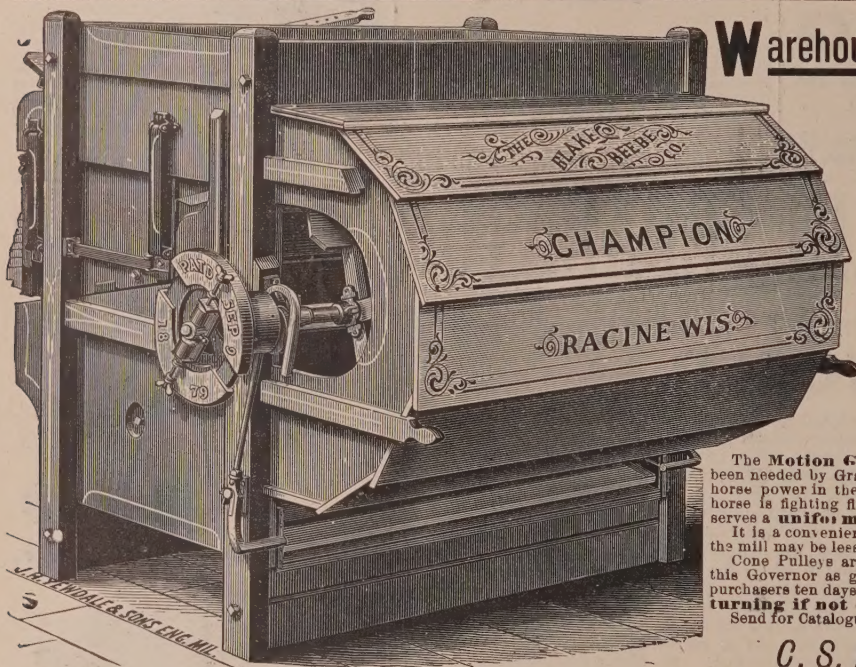
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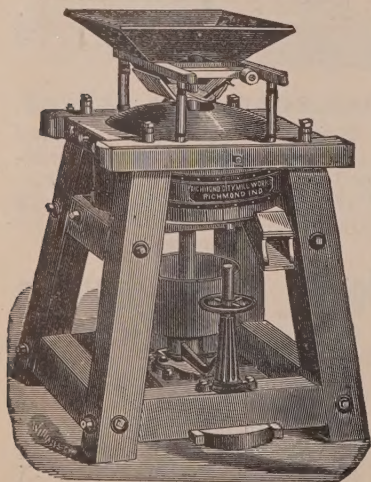
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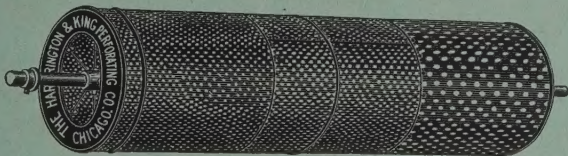
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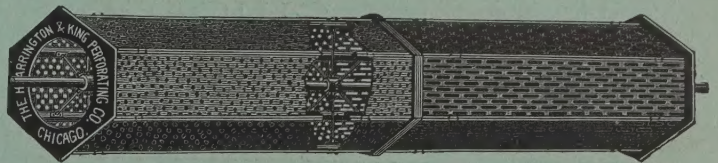
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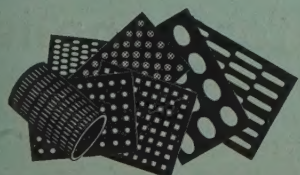
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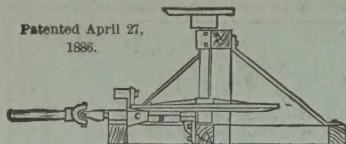


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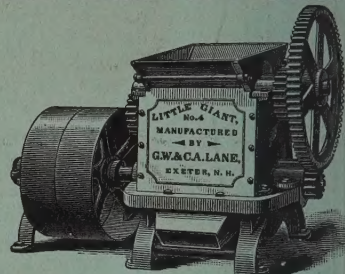
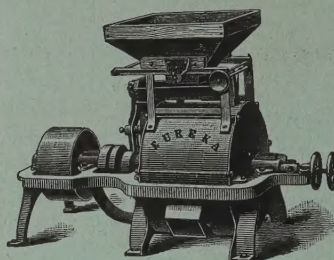
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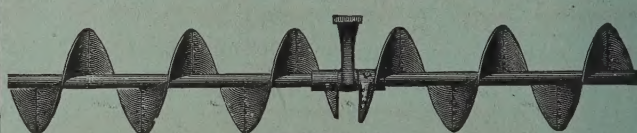
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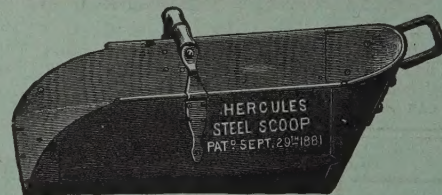
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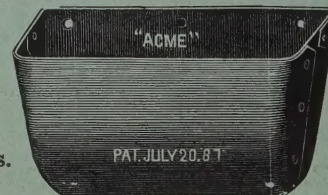
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